

Appendix A. List of References and Documents Reviewed

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Appendix B. Interview and Survey Records

Appendix B1. Regulatory Agency Interview Records

INTERVIEW RECORD

SITE IDENTIFICATION

Site Name: Hunters Point Naval Shipyard		EPA ID: CA1170090087	
Subject: Five-Year Review of Remedial Actions		Time: 12:11 PM	Date: 2/22/2018
Type:	<input type="checkbox"/> Telephone	<input checked="" type="checkbox"/> Visit	<input checked="" type="checkbox"/> Email
<input type="checkbox"/> Other			
Location of Visit: 101 California Street, 48 th Floor, San Francisco, California			

CONTACT MADE BY:

Name: Stephen Banister	Title: Remedial Project Manager	Organization: Navy
Name: John Sourial	Title: Project Manager	Organization: Innovex-ERRG JV
Name: Spencer Johnson	Title: Project Engineer	Organization: Innovex-ERRG JV

INDIVIDUAL CONTACTED

Name: Lily Lee	Title: EPA Site Manager	Organization: EPA Region 9	
Telephone: [REDACTED]		Address: [REDACTED]	
Fax: [REDACTED]	City: San Francisco	State: CA	Zip: [REDACTED]
E-mail address: [REDACTED]			

SUMMARY OF CONVERSATION

In-person interview held with Lily Lee (EPA) on 2/22/2018. Interview team transmitted notes from the meeting to Lily Lee on 2/26/2018. Formal responses provided on the following pages provided to the interview team on 03/14/2018.

INTERVIEW RECORD

1. What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth Five-Year Review (2013 to present)?

I have been working on HPNS since June 2014. My overall impression of the cleanup work at HPNS is that the Navy has made this cleanup project a high priority and a great deal of Navy resources and effort are going into the cleanup. The emergence of widespread falsification of radiological data by Tetra Tech EC Inc. has been a significant problem that will require substantial rework and that has undermined trust in the integrity of the cleanup by all stakeholders. The vast scope of the signs of falsification found is unprecedented nationally. As EPA wrote in December, 2016, "the Navy's technical review needs to be comprehensive and holistic to scientifically address protectiveness questions. In addition, proactive and transparent community involvement will be key to address public confidence in the scientific review and its conclusions."

2. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

Over the past five years, U.S. EPA has worked with its state and local regulatory partners to conduct periodic onsite inspections of the Navy's cleanup work at HPNS to understand field conditions. Originally EPA did joint inspections with the State Regional Water Quality Control Board and the State Department of Toxic Substances Control (DTSC). In 2104, because community members continued to raise concerns about dust, EPA also invited the Bay Area Air Quality Management District inspectors to join inspections, and we observed gaps in dust control during such field visits. The Navy improved its dust control practices, and dust complaints have decreased. More recently, the State of California Department of Toxic Substances Control has started sending Industrial Hygienists to perform regular inspections at the site. Reports of those appear on the DTSC's website. They have made no observations of violations. EPA also attends regular monthly BRAC Cleanup Team (including Navy, EPA, and the State) where we review the status of ongoing cleanup actions and provide input.

However, given the egregious failures by Tetra Tech EC Inc. to follow its own workplans, more oversight is clearly necessary. Therefore, EPA has gathered a team of national expert health physicists and a statistician to do detailed reviews of Tetra Tech EC Inc. previous work and Navy plans for rework. When resampling of these locations is conducted, EPA and its state regulatory partners commit to monitoring the rework in person at the site.

3. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

EPA receives frequent strong complaints from stakeholders regarding concerns about health risks and about meaningful community involvement. EPA also receives frequent press questions. The predominant concern in the last five years by far has been the falsification of radiological data by Tetra Tech EC Inc.

Examples of radiological-related activities that have prompted regular discussion amongst EPA, the Navy, and stakeholders include the following:

- the Nuclear Regulatory Commission (NRC) documented violations regarding soil in trenches in one part of Parcel C.*
- Non governmental organizations have filed petitions to the NRC and to the State that are relevant to radiological cleanup at this site.*
- EPA stated in its comments to the Navy on its Draft Radiological Data Evaluation for Parcels B and G, "The data analyzed demonstrate a widespread pattern of practices that appeared to show potential deliberate falsification, potential failure to perform the work required to ensure ROD requirements were met, or both. The data revealed not only potential purposeful falsification and fraud in terms of sample and/or data manipulation, they also reveal the potential failure to conduct adequate scans, a lack of proper chain of custody for ensuring samples were not tampered with, extensive data quality*

INTERVIEW RECORD

issues (including off-site laboratory data) and general mis-management of the entire characterization and cleanup project.”

The above are serious concerns. The Navy, as the lead on cleanup, has responded through a comprehensive radiological data evaluation, increased oversight of ongoing radiological work, development of plans to resample all radiological survey units on site that involved Tetra Tech EC Inc., and increased community involvement outreach. In its oversight role, EPA has also significantly increased its resources devoted to all these steps to ensure protectiveness at the site. EPA staff also participate in Navy community outreach events (community meetings and bus tours) to ensure community members get the information they need on the cleanup and can express their concerns. EPA also provides input to the Navy on how to make community involvement practices more effective.

4. Do you feel well informed about the site’s activities and progress?

The BRAC Cleanup Team meets monthly and the Navy project managers provide general updates on some cleanup project at HPNS. The Navy also provides updates to the comprehensive project schedule under the HPNS Federal Facility Agreement (FFA), which identifies major milestones in each parcel. In addition to the technical deliverables required under the FFA, Navy project managers email me and my State counterparts with project updates and uses technical meetings to solve more complex issues concerning a cleanup project area. The amount of information provided at the BCT Meetings, especially with respect to non-radiation sites/issues, has decreased over the past five years. Thus, at times EPA has sometimes not understood the Navy’s intentions when we have received documents for review, so more discussion, longer comments, and more meetings have been needed. As another example, the Navy changed the locations of wells in the Basewide Groundwater Sampling Plan without prior notification and justification to the regulatory agencies. More proactive sharing of information would improve efficiency in document reviews and ensure adequate oversight.

5. Do you have any comments, suggestions, or recommendations regarding the site?

As EPA stated in its comments on the draft Radiological Data Evaluation Report for Parcels B and G, “In the bigger picture, beyond the scope of this specific Report, prior to resampling efforts, a thorough review of work plans, process review, documentation, and data quality should be of primary concern to ensure that high quality defensible data is obtained. Ongoing onsite oversight by the Navy and regulatory agencies should be conducted frequently.” The Navy hired a third-party contractor for oversight of ongoing radiological work, both in the field and review of procedures and documents. This practice is helpful and should be expanded. More broadly, please address in the Five-Year Review the steps the Navy has already taken and will take in the future to improve contractor oversight.

In addition, the radiological data falsification has dramatically increased the level of community concern about health risks and credibility of the cleanup. As EPA wrote in 2016 recommendations for the Tetra Tech EC Inc. evaluation, “The overall objective of the following recommendations is to maximize public confidence in the Tetra Tech investigation process by establishing a consistent flow and transparent exchange of information with the public as the Navy’s workplan unfolds. Consistently throughout the process, not just at project milestones, the community is expected to be ‘brought along’ for input and participation with regulators as investigatory processes are established and decisions are made.” While the Navy has stepped up its community involvement efforts, EPA continues to recommend more practices to improve meaningful dialogue, e.g. that the Navy should fully advertise all its public presentations, including those hosted by other organizations and that the Navy should be ready to discuss radiological issues upon request in an open forum at any public meeting, not just at those where that is the advertised topic. Also, EPA has repeatedly recommended that the Navy, as the lead on the cleanup, attend local community meetings, especially when invited to do so. These recommendations should be part of the 2018 Community Involvement Plan update. Doing so will help maximize the opportunity for the public to receive factually correct information and will demonstrate that the Navy is committed to a transparent process.

INTERVIEW RECORD

As part of this Five-Year Review, the most current information related to potential climate change impacts should be evaluated to ensure protectiveness of site remedies. For example, please review the containment plans for the landfill using the most current projections for sea level rise.

Please address PFAS compounds in the Five-Year Review. The military specifications for aqueous film forming foam (AFFF) were adopted in December 1969, so AFFF could have been used to fight fires for about 4 to 5 years. In addition, starting in the early 1950s, PFAS compounds were added to liquids for nearly every process involved in plating. PFAS compounds were also used in liquid shields to reduce vapors from plating operations.

INTERVIEW RECORD

SITE IDENTIFICATION

Site Name: Hunters Point Naval Shipyard		EPA ID: CA1170090087	
Subject: Five-Year Review of Remedial Actions		Time: 1:00 PM	Date: 2/22/2018
Type:	<input type="checkbox"/> Telephone	<input checked="" type="checkbox"/> Visit	<input checked="" type="checkbox"/> Email
<input type="checkbox"/> Other			
Location of Visit: 101 California Street, 48 th Floor, San Francisco, California			

CONTACT MADE BY:

Name: Stephen Banister	Title: Remedial Project Manager	Organization: Navy
Name: John Sourial	Title: Project Manager	Organization: Innovex-ERRG JV
Name: Spencer Johnson	Title: Project Engineer	Organization: Innovex-ERRG JV

INDIVIDUAL CONTACTED

Name: Nina Bacey	Title: Project Manager	Organization: CalEPA – California Department of Toxic Substances Control	
Telephone: [REDACTED]	Address: [REDACTED]		
Fax: [REDACTED]	City: Berkeley	State: CA	Zip: [REDACTED]
E-mail address: [REDACTED]			

SUMMARY OF CONVERSATION

In-person interview held with Nina Bacey (DTSC) on 2/22/2018. Interview team transmitted notes from the meeting to Nina Bacey on 2/26/2018. Formal responses provided on the following pages provided to the interview team on 3/3/2018.

INTERVIEW RECORD

1. What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

I have been working on the HPNS project Site since early 2015. Cleanup work of chemicals of concern (COCs) in soil, soil gas and groundwater is generally moving at an adequate pace and work quality has generally fine since I began working on the Site.

When I started working on this Site, the finalization of radiological survey reports for various buildings were on hold. The California Department of Public Health and the Navy were discussing the path forward after discovering the Navy contractor had not performed all surveys at the speed required in the approved work plan. An agreement was reached in approximately one year and additional surveys were conducted within another six months. The Navy and regulatory agencies conducted more extensive oversight of the resurveying activities. Some reports were then finalized. However, in late 2016 additional accusations were made against the Navy's contractor alleging more extensive sampling and data issues. Therefore, the finalization of the remaining building reports has again been put on hold. These issues have shown that the Navy needs to improve its oversight of its radiologic investigation and cleanup contractors.

2. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

I have conducted periodic site visits to observe the Navy's remediation fieldwork in Parcels B-1, B-2, C, E-2, F. I conducted periodic inspections and oversight for rescanning of radiological field work. The Navy provides occasional reporting on the status of remediation fieldwork to the Base Closure Team (BCT). The Navy also provides updates upon DTSC request. DTSC conducts periodic perimeter dust monitoring at Parcel E-2 to ensure that the Navy contractor is conducting their required dust control measures and controlling dust emissions appropriately. I attend monthly BCT meetings and technical meetings (conference calls). Regular communication between the Navy and DTSC is daily via email and/or telephone calls. The frequency is adequate. Communication and coordination between the DTSC, US EPA, the Water Board and CDPH is great.

3. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

Dust: The community raised concerns related to dust generation and offsite migration at Parcel E-2, so DTSC initiated its own dust monitoring twice weekly for 1-2 hours per event. This was subsequently reduced to once per month based on results. The air monitoring results are available on Envirostor.

Radionuclides: Protection of the community (human health and the environment) is a high concern of the community due to public allegations of data falsification. Therefore, the community is very concerned about the adequacy of the Navy's radiological cleanup activities. DTSC has received numerous inquiries and/or requests for DTSC to play a more active role with regard to the soil falsification issue, and to make sure the Navy redoes the cleanup work at the Hunters Point Site. DTSC is working with the US EPA, CDPH and the Navy to

INTERVIEW RECORD

determine appropriate steps to resolve this issue. These requests have come from the community, press, and environmental justice groups. We have received Public Records Act requests for records from the press, environmental justice groups and others. DTSC responds accordingly to those requests.

4. Do you feel well informed about the site's activities and progress?

Yes, I generally feel well informed. Radiological issues have complicated the cleanup process, slowed the property transfer progress, and diverted DTSC staff resources, delaying review of other non-radiological documents. As the lead regulatory agency, EPA Region 9 communicates more regularly with the Navy and promptly relays information to DTSC. The DTSC and US EPA Project Managers communicate daily on project issues. Currently, DTSC also communicates nearly daily with Navy staff on non-radiological site activities, and daily with CDPH on radiological site activities.

5. Do you have any comments, suggestions, or recommendations regarding the site?

The FFA schedule should be adjusted to permit adequate time for non-radiological document reviews. The radiological soil and building evaluations have taxed DTSC's ability to meet review deadlines. The radiological documents are time-consuming to review and evaluate.

Greater oversight by Navy RPMs and RASO of contractor field work and document review may be necessary. At times, some documents appear to lack thorough review by the Navy (both in ensuring field documentation is complete and in providing adequate reports). Poor document quality was an issue in 2016, but it currently occurs infrequently. Quality control issues have been seen on both radiological and non-radiological field forms/notes and documents.

INTERVIEW RECORD

SITE IDENTIFICATION

Site Name: Hunters Point Naval Shipyard		EPA ID: CA1170090087	
Subject: Five-Year Review of Remedial Actions		Time: 2:00 PM	Date: 2/22/2018
Type:	<input checked="" type="checkbox"/> Telephone	<input type="checkbox"/> Visit	<input checked="" type="checkbox"/> Email
	<input type="checkbox"/> Other		
Location of Visit: Phone conference.			

CONTACT MADE BY:

Name: Stephen Banister	Title: Remedial Project Manager	Organization: Navy
Name: John Sourial	Title: Project Manager	Organization: Innovex-ERRG JV
Name: Spencer Johnson	Title: Project Engineer	Organization: Innovex-ERRG JV

INDIVIDUAL CONTACTED

Name: David Tanouye	Title: Engineering Geologist	Organization: CalEPA – San Francisco Bay Regional Water Quality Control Board	
Telephone: [REDACTED]	Address: [REDACTED]		
Fax: [REDACTED]	City: Oakland	State: CA	Zip: [REDACTED]
E-mail address: [REDACTED]			

SUMMARY OF CONVERSATION

Telephone conference interview held with David Tanouye (RWQCB) on 2/22/2018. Interview team transmitted notes from the meeting to David Tanouye on 2/26/2018. Formal responses provided on the following pages provided to the interview team on 03/05/2018.

INTERVIEW RECORD

1. What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

I began working on HPNS team for the Regional Water Board in Dec 2017, and took on the role of project manager in Feb 2018 after Tina Ures left her position. My initial impression is that cleanup is being conducted satisfactorily. I attend basewide meetings, interaction is frequent, and responsiveness of the Navy is good.

2. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

I have been on monthly site inspections since I started on the HPNS project. The fieldwork tracking sheet is a useful tool to permit coordination with field teams. I attended weekly meetings or conference calls for various aspects of projects, and review/respond to questions on documents, as needed. I am not really involved in commenting on radiological issues and documents, but the technical team meetings keep me informed on the status of the radiological cleanup. I am aware of when FFA documents are due. I attend community meetings. I find that communication is adequate. In the past, meetings on petroleum program were not frequent or regular. We worked with the Navy to established a monthly call to maintain regular interaction and receive regular updates.

3. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

I have not received any complaints, violations, etc. I have seen emails regarding complaints received by EPA (via email). One concern the RWQCB has relates to buildings releasing paint chips that can migrate to swales and San Francisco Bay.

4. Do you feel well informed about the site's activities and progress?

I attend monthly meetings on petroleum. I find it useful to have regular phone calls and meetings. I am deferring commenting on progress, as I have not been involved for very long. My impression is that site activities are well organized.

5. Do you have any comments, suggestions, or recommendations regarding the site?

I would like to see additional organization for petroleum site activities. Document tracking, field activities, etc. In certain cases, especially those related to commingled petroleum contamination, we have received RTCs that deflect our comments and point to another document without citing specific language to address the concern. We understand that corrective actions for petroleum have not been consistent, and in some cases fall behind the CERCLA schedule. However, we expect RTCs to adequately respond to our comments, with fully paraphrased responses when referencing another document.

INTERVIEW RECORD

SITE IDENTIFICATION

Site Name: Hunters Point Naval Shipyard		EPA ID: CA1170090087	
Subject: Five-Year Review of Remedial Actions		Time: 2:35 PM	Date: 2/22/2018
Type:	<input type="checkbox"/> Telephone	<input checked="" type="checkbox"/> Visit	<input checked="" type="checkbox"/> Email
<input type="checkbox"/> Other			
Location of Visit: 101 California Street, 48 th Floor, San Francisco, California			

CONTACT MADE BY:

Name: Stephen Banister	Title: Remedial Project Manager	Organization: Navy
Name: John Sourial	Title: Project Manager	Organization: Innovex-ERRG JV
Name: Spencer Johnson	Title: Project Engineer	Organization: Innovex-ERRG JV

INDIVIDUAL CONTACTED

Name: Amy Brownell	Title: Environmental Engineer	Organization: San Francisco Department of Public Health	
Telephone: [REDACTED]	Address: [REDACTED]		
Fax: [REDACTED]	City: San Francisco	State: CA	Zip: [REDACTED]
E-mail address: [REDACTED]			

SUMMARY OF CONVERSATION

In-person interview held with Amy Brownell (SFDPH) on 2/22/2018. Interview team transmitted notes from the meeting to Amy Brownell on 2/26/2018. Formal responses provided on the following pages provided to the interview team on 3/8/2018.

INTERVIEW RECORD

1. What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

There has been a tremendous amount of work and progress. There has been significant and very visible earthwork, especially in Parcel E-2, completion of durable covers across the base, transfers of D-2, UC-1, UC-2 (which required cooperation by all parties for the post-CERCLA process and OCII approval). There would have been more transfers had the problems with the Tetrachloro radiological data not arisen. Progress is continuing and there's still good progress being made, despite the "road block" of the radiological issues. Unfortunately, the delays may have impacts on OCII's and the developer's schedule and planning.

2. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

Our office plays two roles in the HPNS cleanup. We are both the independent Health Agency for the City and County of San Francisco and we also provide technical advice to many City departments; most prominently the Department of Public Health, the Office of Community Investment and Infrastructure and the Mayor's office and the Mayor's HPNS Citizens Advisory Committee about the Navy's cleanup. In these unique roles, we can assist the Navy in verifying that their cleanup will be compatible the planned redevelopment and ensure that the cleanup protects human health and the environment. We communicate on a daily basis with the Navy and Regulatory Agencies and participate in the Base Closure Team. We have independent technical consultants who review the Navy's information and assist in providing independent comments on the Navy's work.

Communication is more than adequate. Recent issues have made communication more robust. There has been communication on an almost daily basis between all parties about all the Navy cleanup issues and the Regulatory Agencies oversight of those issues. SFPDH is kept well informed by all parties.

3. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

We do not have an independent regulatory oversight role. As described above, we work closely with the Navy and Regulatory Agencies. However, we do not directly respond to incidents related to Navy activities, that responsibility rests with the Navy and the Regulatory Oversight Agencies. SFPDH gets complaints and inquiries along the same lines as other agencies. Typical protocol is to refer the inquirer to the appropriate agencies and assist by providing contact information or specific background about the issues. A typical question is "Do you think the site is safe?" SFPDH shares all information about the work that has been done, the CERCLA process, and requirements for transfer, and the fact that the site is safe in the current condition and will be safe for the current and future uses because of the detailed CERCLA process and the requirement that the Regulatory Agencies verify that the property is suitable for the intended uses prior to transfer.

4. Do you feel well informed about the site's activities and progress?

I am very well informed.

INTERVIEW RECORD

5. Do you have any comments, suggestions, or recommendations regarding the site?

In 2008, San Francisco voters passed Proposition G that makes it City Policy to encourage timely development of the land for the Hunters Point Shipyard and Candlestick Point development

<https://sfpl.org/index.php?pg=2000027201&propid=1800>. As the Department in charge of maintaining public health, we are committed to working with the Navy and Regulatory Agencies to ensure public health and safety as part of the transfer and timely development. We will continue in our role of promoting open communication with the public about the land use restoration and cooperate with all parties to meet the will of the SF voters.

Appendix B2. Community Member Survey Records

#1

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Monday, February 26, 2018 7:37:15 PM
Last Modified: Monday, February 26, 2018 7:40:15 PM
Time Spent: 00:02:59
IP Address: 72.34.102.48

Page 1

Q1 Please enter your contact information here:

Name	Elizabeth
Address	
City	San Francisco
State	Ca
ZIP	
Email Address	

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

There seems to be more questions than answers. Im not certain we know the true results of the testing and its unclear as to whether its safe to live here.

Q3 What effects have site operations had on the surrounding community?

None

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

Yes. People do not believe it is safe to live herd.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

No

Q6 Do you feel well informed about the site's activities and progress?

No

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Yes

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Newspapers, local news, Facebook

#2

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Monday, February 26, 2018 7:37:04 PM
Last Modified: Monday, February 26, 2018 7:46:40 PM
Time Spent: 00:09:36
IP Address: 72.34.103.125

Page 1

Q1 Please enter your contact information here:

Name	David Springer
Address	[REDACTED]
City	San Francisco
State	California
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Total fraud. The cleanup was rushed and botched and fraudulent so that Lennar could make a fast buck and the city could start collecting taxes.

Q3 What effects have site operations had on the surrounding community?

Engender a lot of mistrust. The site operations keep feeding us a bunch of obviously sanitized PR messages. No transparency at all.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

Most of the people in the Bayview are very concerned about health issues caused by toxicity in the Hunter's Point Shipyard.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

There is a regular, but low-level of criminal activity here, but the most pressing concern is abandoned vehicles and homelessness.

Q6 Do you feel well informed about the site's activities and progress?

I feel like we are fed a bunch of PR releases that are not based on truth. This latest TetraTech fraud has cast the Navy and Lennar as very duplicitous.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Get some people here who will speak transparently and directly to the issues that the residents and community members ask about. Thing like, how can the build-out get back on track, in spite of this fraud? How will the Navy and Lennar take ownership of this current issue of fraudulent soil sampling? It would be a huge gesture of goodwill if Lennar paid current owners damages based on how home values have been negatively affected by this scandal.

This latest issue has many of us regretting our purchases here in the Shipyard. And the current home-owners are either Lennar's best or worst advertising.

So: take ownership of this situation. Don't pass the buck or blame someone else. Be mature and thoughtful. Both Lennar and the Navy need to do this.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Yes! Provide some transparency and claim some ownership of the current fraudulent soil sample issue. Talk about how this is being resolved. Be truthful. Stop with the bogus PR stunts.

#3

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Monday, February 26, 2018 7:37:27 PM
Last Modified: Monday, February 26, 2018 8:01:23 PM
Time Spent: 00:23:55
IP Address: 72.34.102.159

Page 1

Q1 Please enter your contact information here:

Name	Hazel Bautista-Romero
Address	[REDACTED]
City	San Francisco
State	CA
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

First of all, I was already in the impression that the site is cleaned up and that a trusted company was able to test it and declared it to be "safe". I am very disappointed with the turn-out and I would like to see REAL work being done AND making sure that they are also transparent with the residents in the area.

Q3 What effects have site operations had on the surrounding community?

Although some efforts of precaution has been made, this is not enough for the community. I would like to see more efforts in making sure that we go beyond precautions and that we attain the goal of making sure that the area is a safe environment for all.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

Not recently but I know people, who used to live in this area, suffered consequences of the radioactive material that was released in the environment.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

Yes, there were a few vandalism which included: breaking into cars (inside a garage), packages being stolen, and individuals walking in the neighborhood being robbed or treated with malicious intent such as throwing a water bottle to a passerby.

Q6 Do you feel well informed about the site's activities and progress?

My community has been really good in informing and communicating with us about different developments that occur in our neighborhood.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

None. This site is simple, visually well organized and easy to use.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

I would like for the Navy to continue to open avenues for communication to build better relationship with the community.

#4

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Monday, February 26, 2018 9:22:17 PM
Last Modified: Monday, February 26, 2018 9:31:34 PM
Time Spent: 00:09:17
IP Address: 72.34.103.231

Page 1

Q1 Please enter your contact information here:

Name	Jonathan Lee
Organization	SFUSD
Address	
City	San Francisco
State	CA
ZIP	
Email Address	

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

With all of the controversy surrounding tetra techs blatant falsification of data, my overall impression is of doubt. My wife and I have lived in the shipyard for a couple of years as some of the first occupants and we were hopeful that this could be a thriving community to raise our daughter. There are serious health concerns for the neighborhood, and the Navy needs to rectify this as soon as possible.

Q3 What effects have site operations had on the surrounding community?

Haven't really seen the Navy presence (or I am not aware of it), so the effect is a feeling of uncertainty whether anything is actually being done. The Navy could send notices to residents of the Shipyard to let us know when they are here doing work.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

The community would like Parcel A to be retested to give everyone peace of mind.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

There are random thefts of packages from residences that are reported to local authorities, but that seems normal for San Francisco.

Q6 Do you feel well informed about the site's activities and progress?

Negative. Need more transparency about activity on site.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Retest Parcel A to give residents peace of mind and build trust again

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Join the SF shipyard residents Facebook group and regularly post updates.

#5

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Monday, February 26, 2018 9:47:36 PM
Last Modified: Monday, February 26, 2018 9:51:59 PM
Time Spent: 00:04:23
IP Address: 107.77.214.224

Page 1

Q1 Please enter your contact information here:

Name	Cicely Tan
Address	[REDACTED]
City	San Francisco
State	California
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Please retest Parcel A. Everyone says that it is safe but I need to know from the Navy and with recent tests. I am pregnant and want to be sure I am raising my child in a healthy environment. Thank you!!! My family and I appreciate it greatly. Please continue the residents and our requests as it is our lives in your hands.

Q3 What effects have site operations had on the surrounding community?

N/a

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

No concerns although I don't like to hear negative news about all his retesting. Just get it done please.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

No

Q6 Do you feel well informed about the site's activities and progress?

No, not at all

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

as mentioned, please retest Parcel A. This is my life and my family's first home.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Better communication and representation at community meetings.

#6

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 7:04:03 AM
Last Modified: Tuesday, February 27, 2018 7:12:11 AM
Time Spent: 00:08:07
IP Address: 72.34.103.171

Page 1

Q1 Please enter your contact information here:

Name	Conor Mulherin
Address	[REDACTED]
City	San Francisco
State	CA
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Disappointed that whistleblower claims were denied until obviously proven.

Q3 What effects have site operations had on the surrounding community?

Navy's actions are untrustworthy

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

Yes, there's concern in the community over the refusal to retest parcel A, to see minds

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

No

Q6 Do you feel well informed about the site's activities and progress?

Somewhat. Recent discoveries have impacted the sense of being informed.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Would like to understand the new cleanup timelines

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

The website and general comms from the navy are good in terms of method but there's a loss of trust now in the overall process

#7

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 12:03:25 PM
Last Modified: Tuesday, February 27, 2018 1:02:40 PM
Time Spent: 00:59:14
IP Address: 159.45.186.46

Page 1

Q1 Please enter your contact information here:

Name	Joseph Fraga
Address	[REDACTED]
City	San Francisco
State	CA
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

More needs to be done and faster. The Navy response to the Tetra Tech whistleblowers and the subsequent Navy sample data review / report took too long. Given the reported issues with a high percentage of the samples by Tetra Tech, the Navy must move quickly to retest and remediate as needed.

Q3 What effects have site operations had on the surrounding community?

We see the occasional letter of notification that contaminated dust has been kicked up. The Navy must do a better job at containing contaminated dust due to it's operations.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

The community is concerned with the radiological & other confirmation at the site, and ensuring it gets retested and remediated quickly for turnover to the city of SF. The amount of time for the Navy to move on these issues is especially concerning.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

I'm not aware of anything noted above.

Q6 Do you feel well informed about the site's activities and progress?

Marginally. The Navy should reach out more directly to the residents of the area- in particular the new SF Shipyards residents- which live on the already turned over and built on land parcels at the Shipyard. Specifically the Navy could send updates to the Home Owners Association to then send out to the residents via email. A Quarterly update seems like a good idea noting how to contact the Navy and listing your website that has additional information on the cleanup, etc..

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

see question 6 on reaching out to the Residents

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

see question 6 on reaching out to the Residents

#8

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 5:47:30 PM
Last Modified: Tuesday, February 27, 2018 5:53:15 PM
Time Spent: 00:05:44
IP Address: 72.34.102.157

Page 1

Q1 Please enter your contact information here:

Name	Jason Fried
Title	resident
Organization	Resident at the Shipyard
Address	
City	San Francisco
State	CA
ZIP	
Email Address	

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Not impressed. Have been told for years everything is fine only to find out things are not fine

Q3 What effects have site operations had on the surrounding community?

The delays in all this means delays in getting the services we want out here.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

Many of us who are concerned about what is in the ground and how long it will be before it is fixed. We are also concerned that everything we have been told about Parcel A, where we live, is not correct. Navy should do re-testing on Parcel A as well as the areas to help relieve concerns we have and future residents may have.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

No

Q6 Do you feel well informed about the site's activities and progress?

Not really. I learn more from the news and have a hard time getting real answers from Navy.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Need more transparency and getting all of the shipyard retested, even the parts that have already been turned over.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

More meetings with people who can give real answers and not side step the concerns.

#9

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 5:50:11 PM
Last Modified: Tuesday, February 27, 2018 5:59:42 PM
Time Spent: 00:09:31
IP Address: 174.7.68.88

Page 1

Q1 Please enter your contact information here:

Name	Christina Laffin
Address	[REDACTED]
City	San Francisco
State	CA
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

I am concerned with the lack of transparency and evidence of fraudulent results. As someone who purchased a home recently in this area, I worry about health and safety issues and, to a lesser extent, impact on property values.

Q3 What effects have site operations had on the surrounding community?

The failure to address doubts about the clean-up process in a thorough and timely manner has sown discord and lack of trust among residents.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

Yes, there is general concern and doubt among residents about the veracity and reliability of testing.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

Only the fraudulent test results outlined by the media which are of crucial importance and yet remain largely unaddressed from the perspective of residents.

Q6 Do you feel well informed about the site's activities and progress?

No. There is a general lack of clarity about how soon things will progress and what will be redone/retested to ensure clean-up has been done thoroughly and correctly.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Spend the time and money necessary to make sure the clean-up is carried out thoroughly while communicating a clear time-line that is actually followed.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Yes, since media sources seem to provide the most up-to-date information, communicate to media outlets regularly and openly.

#10

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 6:08:33 PM
Last Modified: Tuesday, February 27, 2018 6:19:05 PM
Time Spent: 00:10:31
IP Address: 199.212.218.22

Page 1

Q1 Please enter your contact information here:

Name	Alex Deschamps
Address	[REDACTED]
City	SAN FRANCISCO
State	California
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

My overall impression is that the Tetra Tech clean up was falsified and we have been mislead for years to believe that all land has been clean and is ready for residential use. As a homeowner in the Shipyard I am very troubled by the lack of transparency around the clean up and do not feel safe for me our my family. I would hope that Parcel A would be retested to confirm the soil to be at safe levels, but have little hope that anyone of authority will initiate such a study on parcel A.

Q3 What effects have site operations had on the surrounding community?

The Shipyard lack adequate amenities to be consider a viable residential neighborhood. I purchased my home with the understanding of this, but that such amenities would be part of later phases. Delays caused by the falsified studies only cause me to live in an area that cannot satisfy a families day to day needs.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

There have been numerous reports of falsified soil samplings and the mere fact I am filling out this survey only further stresses that something was handled improperly.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

n/a

Q6 Do you feel well informed about the site's activities and progress?

No

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Retesting of parcel A would reaffirm the stance that it is safe for residential use.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Yes, more transparency as to the status and results of testing and action plans to remedy any errors so we can get development back on schedule.

#11

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 6:23:59 PM
Last Modified: Tuesday, February 27, 2018 6:30:18 PM
Time Spent: 00:06:19
IP Address: 50.203.12.50

Page 1

Q1 Please enter your contact information here:

Name	Jenna Hansen
Title	Director of Product
Organization	Taylor Stitch
Address	
City	San Francisco
State	CA
ZIP	
Email Address	

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Terrible - I have no trust.

Q3 What effects have site operations had on the surrounding community?

Lost all trust in the integrity.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

Yes, as a resident I'm very aware of the continue falsification. I demand that Parcel A be tested.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

Yes, there was a drive-by shooting at Innes & Jerrold the first week I moved in. There have been cars broken into in private garages. Multiple packages stolen.

Q6 Do you feel well informed about the site's activities and progress?

I have to seek out the information. The progress is very ambiguous.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

TEST PARCEL A to dismiss the speculation that it's also contaminated. People including myself are living there!

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Yes - put up signs around the Shipyard to notify everyone of the upcoming meetings. Make a facebook group. Attend every master's meeting with updates.

#12

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 6:28:25 PM
Last Modified: Tuesday, February 27, 2018 6:41:15 PM
Time Spent: 00:12:50
IP Address: 50.232.37.10

Page 1

Q1 Please enter your contact information here:

Name	Anil Vittal
Title	Business Operations Manager
Organization	Tile
Address	
City	San Francisco
State	California
ZIP	
Email Address	

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Awful. I don't have a great idea of what is safe and what isn't. I have no idea how long it is going to take to clean up the Shipyard. They say Parcel A is safe...but how do I know for sure?

Q3 What effects have site operations had on the surrounding community?

My day to day isn't affected.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

No one understands anything that is going on. The Navy had a meeting a few weeks ago for Shipyard residents and each station or booth we went to had different people saying different things. No one knew the big picture they only knew a bit about their section. Once the protesters came the residents were ignored.

All we know is that Tetra falsified reports and there is still clean up going on. We don't know if things are still contaminated, how long it will take, or any other additional information.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

Not that I know of.

Q6 Do you feel well informed about the site's activities and progress?

Absolutely not. The Navy has done a terrible job of informing us. Beyond terrible. Other than the basics no one has any idea of what is going on.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Tell us what is going on. Have one point of contact that comes down and explains to all the Lennar residents what is happening and have them answer any questions that we have. Like I said above, the Navy came before but there wasn't any one person that knew the whole story. Also, a lot of those people didn't have answers to many of our questions.

I can't explain how frustrated I am by this whole process. It has been beyond terrible.

Q8 Are there ways that the Navy can better communicate with the local community? If your answer is "yes", please provide your suggestions.

YES!!!!

-Have one person hold a town hall type meeting for the residents of Lennar. Please make sure that person knows what they are talking about and has a good idea of the whole story. Have this person prepared to be here for a couple of hours at least. The residents here are owed that much.

-Continue to send updates on where you are in the process of the cleanup (email or mail)

-Update us on if you found anything alarming

-Give us some tentative timelines on when you expect to be done with testing of each parcel

#13

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 7:27:27 PM
Last Modified: Tuesday, February 27, 2018 7:34:30 PM
Time Spent: 00:07:02
IP Address: 72.34.102.186

Page 1

Q1 Please enter your contact information here:

Name	RILEY M SMITH
Address	[REDACTED]
City	SAN FRANCISCO
State	CA
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

It's being done transparently (as compared to the Tetra Tech) mishaps. I have confidence in what has been described to me in in-person meetings, but can not be 100% confident considering I'm not on the ground day-to-day.

Q3 What effects have site operations had on the surrounding community?

It's delay in clean-up, from my understanding, has delayed the hand-over to the City, pushing development of Phase 2 back. This affects and speed of which people move here and the resulting community. Construction of the development proves to have a larger daily effect than the work done on the Navy property.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

N/A

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

N/A

Q6 Do you feel well informed about the site's activities and progress?

Adequately. With the recent SF Curbed article and past Tetra Tech efforts, it is important that the Navy continue to build awareness and listening sessions for current residents. My biggest concern is that a) somehow Parcel A was not tested adequately, b) that Parcel A actually has above normal radiation, and c) consequently, the negative press affects our community development and our individual property values.

Your ability to communicate this out and show progress helps quell these 3 concerns. Any time you question whether you're doing enough, side on doing more.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Do it correctly; overshare; be transparent; do it as quickly as possible w/o doing it incorrectly; and make sure our community can flourish.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

NA

#14

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 7:53:03 PM
Last Modified: Tuesday, February 27, 2018 8:01:12 PM
Time Spent: 00:08:09
IP Address: 72.34.103.87

Page 1

Q1 Please enter your contact information here:

Name	Susan Campbell
Address	[REDACTED]
City	San Francisco
State	CA
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Moved here one year ago- unclear about cleanup work.

Q3 What effects have site operations had on the surrounding community?

Again, unclear.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

I've spoken to a few people- most everyone wants a clean environment to live in. Safe for all.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

No

Q6 Do you feel well informed about the site's activities and progress?

Somewhat

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Like everyone I've spoken to - I want a clean, safe living environment .

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Meetings, and email communications.

#15

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Tuesday, February 27, 2018 8:57:01 PM
Last Modified: Tuesday, February 27, 2018 9:09:14 PM
Time Spent: 00:12:12
IP Address: 72.34.102.172

Page 1

Q1 Please enter your contact information here:

Name Paloma

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Very concerning as a new shipyard resident and home owner. First and foremost we want to ensure our health is not being affected by living here. Secondary the clean up needs to be completed correctly asap so the development can continue to flourish. Its not attractive for businesses or other home owners to move out here the level of uncertainty surrounding the toxic clean up.

Q3 What effects have site operations had on the surrounding community?

disruption, noise, parking issues, dust in homes

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

the community is concerned on any levels of radiation or other toxic, life threatening issues.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

yes there has been theft and vandalism inside the Merchant building (451 Donahue St). We've had car break ins inside the merchant garage and also looters stealing mail packages.

Q6 Do you feel well informed about the site's activities and progress?

no

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Let the residents of the community have a voice that actually matters. We are aware of meetings, but these meetings rarely area chance for people's opinions to be taken into consideration.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Yes, send emails with a google calendar link

#16

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Wednesday, February 28, 2018 11:04:37 AM
Last Modified: Wednesday, February 28, 2018 11:17:33 AM
Time Spent: 00:12:56
IP Address: 75.37.27.97

Page 1

Q1 Please enter your contact information here:

Name	Micharl Hamman
Organization	IBNA, EDOT
Address	
City	San Francisco
State	CA
ZIP	
Email Address	

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Slow, slower that it should be. This project should have been completed years ago.

Q3 What effects have site operations had on the surrounding community?

Few effects

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

a.) How could the Navy allow such a massive fraud. Why are not the guilty parties going to jail? What steps have been taken (if any) to prevent this from happening again?

b.) What other assurance does the Navy have that the clean up was actually done correctly other than the fraudulent test results for Tetra-Tech? Was there any other supervision of the clean up work? Did the Navy not have it's own staff observing this work? If not why not?

c.) Why is the retesting not being done in an expedited manor? Why will it take so long to retest the site?

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

No

Q6 Do you feel well informed about the site's activities and progress?

Yes

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

This project is so far behind the original schedule that the remaining work should be done on an "emergency" basis and completed as quickly as is possible. This community has been put on hold long enough and needs to get on with it's life. The projected schedule for completion of the clean-up and transfer is unacceptable.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

No

#17

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Wednesday, February 28, 2018 11:21:13 AM
Last Modified: Wednesday, February 28, 2018 11:38:19 AM
Time Spent: 00:17:05
IP Address: 23.118.69.85

Page 1

Q1 Please enter your contact information here:

Name	Bodo Klawonn
Address	[REDACTED]
City	San Francisco
State	CA
ZIP	[REDACTED]
Email Address	[REDACTED]

Q2 What is your overall impression of the cleanup work conducted at Hunters Point Naval Shipyard (HPNS) over the period of the fourth five-year review (2013 to present)?

Needs to improve accuracy of soil testing.

Q3 What effects have site operations had on the surrounding community?

Have not notice any side effects.

Q4 Are you aware of any community concerns regarding the site or its operation and maintenance? If so, please give details.

Yes, the soil testing was falsified.

Q5 Are you aware of any events, incidents, or activities that have occurred at the site, such as vandalism, trespassing, or anything that required emergency response from local authorities? If so, please give details.

NO

Q6 Do you feel well informed about the site's activities and progress?

Not enough information is coming forward regarding the toxicity of the super fund site.

Q7 Do you have any comments, suggestions, or recommendations regarding the site?

Please have Parcel A retested as it affects my neighborhood.

Q8 Are there ways that the Navy can better communicate with the local community? If you answer is "yes", please provide your suggestions.

Yes thru social media and outreach.

Appendix B3. Public Comments on Draft Five-Year Review Report

Critique by the Committee to Bridge the Gap of the Navy's Draft Five-Year Review Hunters Point Naval Shipyard

7 September 2018

Introduction

Pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, also known as Superfund), the Navy is required every Five-Years to review the protectiveness of cleanup remedies at the Hunters Point Superfund site in light of current information and knowledge. At the core of this requirement is the recognition that new developments—e.g., evolving scientific findings about toxicity, tighter modern cleanup standards, discoveries of failures of cleanup actions taken at a site—can mandate going back and undertaking more cleanup in order to protect public health and the environment.

Unfortunately, the current Five-Year Review draft is woefully deficient. The problems are not merely inadequate and/or misleading content, but a failure to consider key matters that should be critical parts of such a Review. The deficiencies are thus not just with what it says, but what it doesn't. As is often the case, the key is the “dog that didn't bark.” We discuss these problems below, and urge that the Review be completely redone and reissued for public comment.

Failure to Examine the Systemic Failure of the Cleanup Process Evidenced by the Tetra Tech Scandal

In the Five-Years since the last review, the fundamental integrity of the cleanup operation has been called into question. The Navy contractor responsible for most of the radionuclide measurements, Tetra Tech, has been alleged to have falsified much of those measurements. The US EPA and state regulators have estimated that 90-97% of the survey units in the parcels they have examined were subject to data fabrication and other fraud and questionable measurements. Only a tiny fraction (for Parcel G, just 3%) were found to be free of signs of falsification. Two Tetra Tech supervisors have pleaded guilty in federal court. One made clear in his plea agreement that he was under pressure from higher-ups to declare contaminated areas actually clean so as to avoid the need to remediate them.

The critical question arising from this scandal, described as one of the largest cases of environmental fraud in the country, is how high up does the problem go and how could it have gone on so long? At minimum, there was a complete breakdown in oversight by the Navy, as

well as the US EPA and state regulators. (Under CERCLA, the Navy is the lead for the cleanup and US EPA must sign off on all aspects of cleanup proposals for the site; additionally, there is a Federal Facilities Agreement that gives state agencies similar powers and responsibilities.) That systemic failure of oversight raises disturbing questions about the adequacy of cleanup actions throughout the Hunters Point Naval Shipyard (HPNS), past and future, not just the Tetra Tech work on radiation.

Even more troubling is the prospect that Tetra Tech's data fabrication was in response to signals, implicit or explicit, received from the Navy to cut corners wherever possible to reduce its cleanup obligations and associated costs. If this is true, then the work of other contractors, and not just on radioactive but also toxic chemical contamination, throughout HPNS may be similarly tainted. In either case—fundamental failure of oversight and/or actual signals sent to contractors to find ways to not clean up contamination that should have been—the systemic breakdown of the integrity of cleanup operation must be at the core of this Five-Year Review.

However, there is no consideration whatsoever of these fundamental issues in the draft Five-Year Review. The Tetra Tech scandal is barely mentioned; when it is referred to, in passing, it is without any assessment of the implications for the integrity of the overall cleanup. Instead, brief boilerplate language is included saying merely that the Navy will take care of the issue through radiation retesting. Not a word is included about the implications of the scandal for the adequacy of the cleanup process itself, because of systemic failures of oversight or, even worse, potential involvement of the Navy in pushing contractors to find ways around having to clean up that which should be cleaned up.

All of this is particularly troubling in light of the fact that the prior Five-Year Review was prepared by – Tetra Tech. Yet this most recent draft Five-Year Review relies heavily and uncritically on Tetra Tech's prior Review, and indeed, on dozens of other reports by Tetra Tech.

It is frankly rather stunning that the Navy could, after a national scandal that has brought the HPNS cleanup to a virtual halt, issue a Five-Year Review without examination of the implications of the scandal. That failure cripples the Review and portends serious problems for the cleanup ahead.

Failure to Evaluate the Ancient Cleanup Standards Being Employed for Radionuclides at HPNS Against EPA’s Current Preliminary Remediation Goals, Despite Express Direction from EPA to Do So

A key requirement of Five-Year Reviews under CERCLA is to analyze whether the cleanup standards chosen long ago are protective given today’s standards and science. As the EPA describes the requirement, Question B for Assessing Protectiveness: “Are the exposure assumptions, toxicity data, cleanup levels, and Remedial Action Objectives still valid?”¹ Astonishingly, the Navy directly violates that requirement. No such analysis is provided for the radionuclide cleanup standards at HPNS—none.

This fundamental failure is even more remarkable in light of the express direction EPA has repeatedly given the Navy on this matter for HPNS. In its comments on inadequacies in the Navy’s Parcel G retesting plan, EPA stated that a “new Radiation Risk Assessment [needs to be performed] as part of a Five-Year Review to evaluate whether or not the original RG’s [Remediation Goals] are still protective” and noted that it “has separately recommended that the Navy conduct this review, and, if any of the RGs are found to be no longer protective using the most current risk calculators, propose amendments to the Parcel G ROD [Record of Decision] to ensure protectiveness.”² EPA further stated that:

The HPNS’s Five-Year Review occurring in 2018 is evaluating whether the current selected remedies, including these ROD RGs, are still protective and whether any changes are necessary to ensure continued protectiveness. Based on national practices directed by EPA headquarters, EPA expects this process to use the most current version of the EPA Preliminary Remediation Goal (PRG) Calculator and Building PRG Calculator to assess the ROD radiological RGs. The Work Plan should use only those cleanup goals confirmed through this analysis to be protective.³

Despite EPA’s expectation and direction that the 2018 Five-Year Review would, as required, evaluate whether the HPNS remediation goals for radioactivity were still protective, utilizing EPA’s PRG Calculator (for soil) and Building PRG Calculator,⁴ the Navy has simply refused to do so. The Navy has similarly refused to honor commitments to EPA and the state regulators regarding the retesting of Parcel G, as documented in their letters on that subject, resulting in the extraordinary threat by EPA to have to invoke dispute resolution procedures in the Federal Facilities Agreement and by the state agencies to refuse to certify acceptability of the site for release.⁵ This repeated refusal by the Navy to follow direction from its regulators, even in the

¹ EPA, *Five-Year Review Process in the Superfund Program*, April 2003, p. 5

² *EPA Review of the Navy June 2018 Draft Parcel G Removal Site Evaluation Work Plan*, p. 3

³ *ibid.*, p. 6

⁴ The only reference to PRGs in the draft Five-Year Review is in the glossary, raising the question whether an earlier draft actually included a comparison of HPNS standards to the PRGs and someone intervened to have it removed.

⁵ Letters of August 14 2018, from Angela Herrera, EPA, to Lawrence Lansdale, Navy, and from Mohsen Nazemi, DTSC, to Laura Duchnak, Navy.

face of a major scandal involving the cleanup, is extraordinary and places the entire remediation effort in question.

Under CERCLA, “No department, agency, or instrumentality of the United States may adopt or utilize any such guidelines, rules, regulations, or criteria [for cleanup of a Superfund site] which are inconsistent with the guidelines, rules, regulations, and criteria established by the [EPA] Administrator.” As indicated in the quote from EPA’s letter to the Navy above, for radionuclide cleanups at Superfund sites, EPA has established that the guidelines to be used are the PRG calculators for soil and buildings. The Navy was supposed to compare the radionuclide cleanup standards it has been employing at HPNS against the EPA PRG calculators to determine protectiveness. The Navy has simply refused to do this, raising the suspicion that the reason for its refusal to perform the Five-Year Review on this matter as required is that the resulting evaluation would demonstrate the gross inadequacy of the outdated cleanup standards it has long utilized.

The Navy has been using the Atomic Energy Commission’s Regulatory Guide 1.86 for its remediation goals for buildings. The AEC is no longer in existence; the Reg. Guide is forty-four years old and was never based on health or risk, but rather on what hand-held instruments in the 1960s could easily detect. As indicated above, under CERCLA, the Navy is not supposed to use that Reg. Guide but instead EPA’s Building PRG Calculator. When one runs that EPA calculator, one discovers that the Navy cleanup levels for buildings at HPNS are frequently *thousands of times less protective* than the EPA Building PRGs. Indeed, the EPA BPRG Calculator estimates risks from the Navy cleanup levels thousands of times higher than EPA’s primary risk goals and tens of times higher than the absolute upper limit EPA allows. If the required runs had been performed, they would show that the cleanup levels for buildings at HPNS are not protective. Radioactive wastes sent for recycling and disposal at sites other than licensed radioactive waste disposal sites based on these inadequately protective standards would potentially also be at risk, and that matter should be examined in the Review.

Similarly, although the Navy claims to have been using cleanup levels for soil derived from EPA’s PRGs, in fact it is using PRGs from 1991, more than a quarter of a century old, rather than current ones. When using the current PRGs, Navy cleanup levels would appear to be in many cases hundreds of times weaker than the EPA PRGs, with risks exceeding even the upper range of EPA’s required risk range.

One must ask whether the Navy’s refusal to perform the mandatory protectiveness analysis for the old radiation cleanup standards being employed at HPNS is to avoid disclosing these disquieting facts. Given the troubling conduct to date, it is possible that even had such an analysis been performed, the Navy would have altered the defaults for the EPA PRG Calculators in a way to provide a more desired outcome. But then those questionable alterations would be subject to scrutiny in the public review period as well.

The bottom line is that the Navy’s radiological cleanup standards are outdated, are far beyond those that the EPA PRG Calculators would identify, and exceed not just the stated risk goal but even the upper limit of acceptable risk. The Navy needs to revise the Five-Year Review to include the required evaluation of the HPNS radiological cleanup standards, using the EPA PRG

Calculators, without questionable alternations of inputs, and re-release the Review for public review and comment.

Failure to Include Parcel A in the Five-Year Review at All

Parcel A, where people already live, is at the center of concern at HPNS. The Navy decided long ago to simply *declare* most of the parcel non-impacted and therefore not perform any soil testing on most of it, with only a few buildings tested at all. While, contrary to the claim in the Five-Year Review, there appears to have been some limited cleanup in Parcel A, the basic Navy decision was to neither test for nor remediate contamination there.

This has proven very contentious. The California Department of Public Health (CDPH) is at this moment conducting a controversial limited gamma scan of part of the Parcel, using walk-over and driver-over scanning equipment that cannot alpha- or beta-emitting radionuclides and even for gamma-emitters, cannot see most if not all of the gamma radionuclides at the cleanup levels (levels, which as discussed above, are themselves far too high.)

In light of this history, it is inexplicable that the Navy should choose to exclude any evaluation whatsoever of Parcel A in the draft Five-Year Review. Decisions to not test and to not clean up are at the core of evaluating the protectiveness of what has and has not been done for Parcel A. The protectiveness determination is designed to ascertain whether what has *not* been cleaned up may pose an unacceptable risk to the public and/or the environment. Virtually nothing has been cleaned up in Parcel A, and the basis for that decision is extremely flimsy based on current knowledge. Essentially the Navy based it on whether it could find records of radionuclide use in particular buildings in the Parcel, ignoring completely the prospect for contamination from other polluted areas of HPNS migrating to Parcel A (e.g., windblown contamination from decontaminating radioactive ships brought to HPNS from the nuclear tests in the Pacific). Parcel A needs to be included and an honest assessment conducted of the improper assumptions previously used to decide to not test or clean up the Parcel.

Drastically Reduced List of Radionuclides of Concern

The Review also completely fails to perform any evaluation of the silent decision to dramatically decrease the list of HPNS radionuclides of concern from their original number in the 2004 Historical Radiological Assessment (HRA) of about 100 (33 long-lived), to a mere 3 or 4 in various RODs and the Parcel G retesting plan. No testing is occurring for the rest, and they are allowed unlimited contamination levels. The rationale for this decision remains unsupported, seems similar in effect to the data fabrication by Tetra Tech to markedly reduce cleanup obligations by simply ignoring contamination, and should be subject to evaluation under the Five-Year Review. Many radionuclides persist for centuries, and thus, if a radionuclide were of concern fifteen years ago, there is no reason it should now be omitted from the scope of the cleanup, other than to reduce costs born by the Navy.

Manipulated Background Values

In the EPA review of the Navy June 2018 Draft Parcel G Work Plan, the EPA noted the Navy's questionable approach in selecting background values. It also remarked on the failure to include key data, tables, and reports which would validate the background values being employed in the Parcel G retesting. We similarly identified the incomprehensible decision to choose as background locations a building acknowledged to be impacted and, for soil, locations almost exclusively in the midst of the contaminated Superfund site. These practices violate the fundamental requirements for choosing background locations that cannot be affected by the contamination one is trying to assess.

However, this inadequacy is not a one-off exclusive to Parcel G retesting. In fact, the deficient and misleading strategy for selecting background locations and ultimately values has remained consistent throughout the HPNS cleanup, and therefore these same problems are woven throughout remedial and removal work taken place across the site. Despite this, the Navy excludes from evaluation in the Review any consideration of its faulted approach in selecting background locations. This is unacceptable. The EPA gave a direct request for the Navy to re-evaluate their strategy for selecting background values, and we have pointed out additional issues; they are of great importance because they form the very foundation by which a clean up is built upon—if background values are inflated, the entire cleanup loses integrity. Therefore, the Navy should place its methods for selecting background under review.

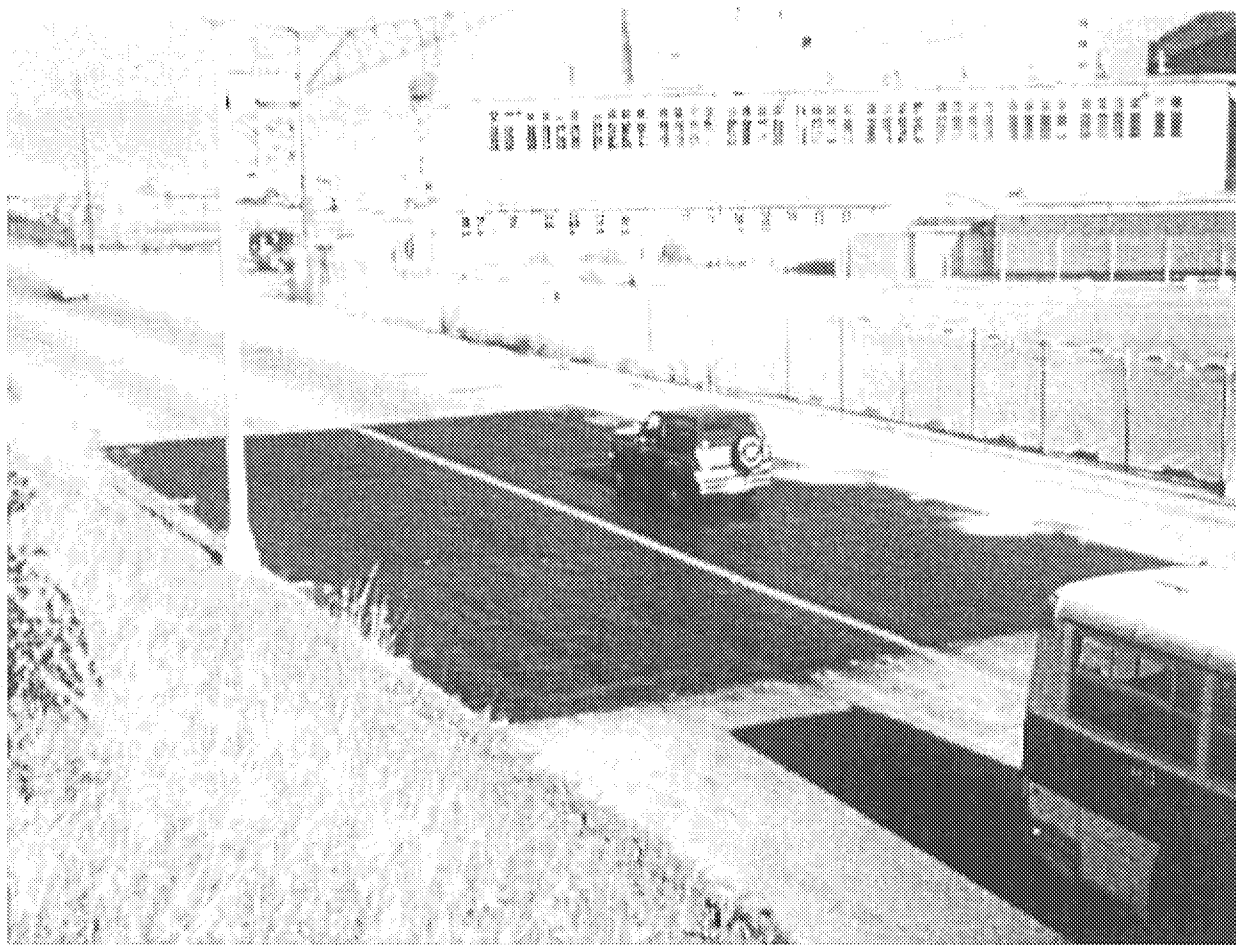
90% of HPNS Arbitrarily Removed from Scope of Measurements and Cleanup

The decision to eliminate 90% of HPNS sites from even consideration for cleanup has never been evaluated or given the explanation that it necessitates, based on current information showing such a decision to be highly questionable. The HRA designated only one tenth of the HPNS sites as having the potential to be impacted, arbitrarily asserting that the rest had no possibility for contamination. Since the past activities of HPNS as well as the various migration pathways present at the site indicate the great potential for the entire site to be contaminated, it remains unclear how a set of incomplete historical documents are sufficient to designate the vast majority as having no contamination. It is even more questionable that this assertion was never reinforced with any substantive quantitative data/measurements. The assertion that the majority of the site is not in need of testing let alone remediation has not been evaluated in light of current information.

Not only does the draft Five-Year Review completely omit key aspects of the cleanup from evaluation, the issues it does touch upon are largely glazed over in a nonchalant manner, lacking any critical examination. This is observed in the following points:

Radioactive Sandblast Grit

Sandblast grit, from sandblasting scores of contaminated ships from the nuclear testing in the Pacific to decontaminate them, is one of the primary mechanisms of pollution at HPNS. However, there remain questions regarding how much sandblast grit was produced at HPNS, how much has been questionably recycled, how much remains on site and how much placed elsewhere offsite, and the environmental impacts that can follow. This Review does not examine those questions. The only mention of Sandblast grit recycling in the Five-Year Review is the following statement, “[b]etween 1991 and 1995, the Navy collected nearly 5,000 tons of sandblast grit from multiple areas at HPNS. The material was sent to an asphalt plant for reuse in an asphalt mix.”(page 3-1). This brief utterance fails to disclose that some of the asphalt was brought back to the site to be used to produce and install asphalt with the contaminated grit.



Asphalt at HPNS made out of HPNS sandblast grit

Other documents indicate that large amounts of additional potentially contaminated grit was sent to the Central Valley to be made into asphalt for use there.⁶ The method for determining whether there was radioactivity in the sandblast grit (and subsequent asphalt) appears primitive at best – a handheld Geiger-counter type device that is unlikely to be able to detect radionuclides at the level of concern.



Hand-held radiation scan of sandblast grit prior to use in asphalt

⁶ Field Demonstration Report on Recycling Spent Sandblasting Grit Into Asphaltic Concrete, Battelle, January 11, 1996

There is no consideration in the Five-Year Review of the protectiveness or danger of either the HPNS asphalt or Central Valley asphalt made with potentially contaminated sandblast grit.

Navy Further Weakening an Already Inadequate Remedial Method

Section 7 of the Review, the “*Issues, Recommendations, and Other Findings*” is stunningly short. One of the three issues that is brought to light, however, is a remarkable disclosure: the inability for soil vapor extraction (SVE) to effectively reduce source mass of volatile organic carbons (VOCs) due to the conditions in the subsurface of the soil. It is then simply asserted that unspecified Institutional Controls (ICs) will compensate for this inadequacy and “maintain future protectiveness.” The ICs the Navy plans to implement in lieu of any actual remediation is restricting contained buildings along with “engineering requirements.”

However, the second issue in section 7 which immediately follows discloses that the regulatory agencies are in disagreement with the Navy’s decision to *decrease* the amount of areas requiring institutional controls (ARICs) by using risk assessment assumptions the regulators find inaccurate. Therefore, the Navy is both relying on ICs on the one hand and reducing the area for which they deem ICs necessary, by way of a manipulated risk assessment, all because the original remedy of actually cleaning up the VOCs isn’t working. How exactly this combination will protect human health is dubious, and should be further examined in the final review.

Heavy Reliance on ICs and Questions About Their Protectiveness

ICs, as briefly addressed in the previous point, are replacing genuine remedial actions such as excavation and removal of contaminated media. Large portions of HPNS have had amendments to their RODs which allow for a significant decrease in excavation and cleanup on the pretense that ICs will compensate. However, the large amount of contaminated land no longer to be cleaned up and the questionable ICs being implemented in the place of cleanup have yet to receive in depth evaluation in light of current knowledge to determine that they are truly protective of human and environmental health. The template for a Five-Year Review, provided by the Navy, calls for an IC Summary Table, shown below, to be included if “ICs have been selected in a ROD or amended ROD, or modified in an ESD.” There is no such table in the Five-Year Review, and considering the great amount of contaminated HPNS land for which cleanup is being abandoned and ICs assumed instead, it is sensible that such an analysis be included so as to provide further information and evaluation, which is currently greatly lacking.

IC Summary Table (Optional – Include if ICs have been selected in a ROD or amended ROD, or modified in an ESD¹)

Table X: Summary of Planned and/or Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Media (e.g., groundwater, soils, sediments)	Choose an item	Choose an item	Parcel # or other identifying information	Use restriction or notice provided by the IC (e.g. restrict installation of ground water wells and ground water use)	Instrument title (e.g. Declaration of Restrictive Covenants, June 2003)

“Ubiquitous” Doesn’t Mean Don’t Clean Up

The amount of contaminated soil being excavated that contain chemicals of concern (COCs) has been greatly in much of HPNS, for example in Parcel B, because the contaminants have been written off as “ubiquitous.” The Five-Year Review allows for one sentence in a table on the matter (Table 2). It is stated, however, in the Amended ROD for Parcel B that:

“The Navy acknowledges that industrial sources of metals exist at HPNS and that there is a potential that some concentrations of metals could have sources other than naturally occurring materials. The Navy has worked to remove these sources during the response actions taken to date. The Navy further acknowledges that the **regulatory agencies do not agree with the Navy’s position** that ubiquitous metals are naturally occurring.”

(emphasis added)

It appears that as a way to circumvent the extensive excavation and removal of contamination that is necessary, the Navy is strategically maneuvering around its responsibility by claiming the contamination comes from the dangerous fill material it brought in. Just because there is a lot of something, doesn’t mean it’s natural or safe; in this case, it confirms the suspected notion that negligent activities by the Navy resulted in extremely widespread contamination. What the Navy is doing is manipulative, and the regulatory agencies don’t buy it. And yet, the entire subject is excluded from any evaluation in the review. The Navy shouldn’t be allowed to *not* clean something up because there is a lot of it. In writing off widespread contamination as ubiquitous, ICs are widely being implemented in lieu of excavation. In fact, only COC “hot spots” are eligible for excavation. A “hot spot” is defined as an area where contamination is detected at **five or ten times** the remediation goals (RGs). Since RGs are already greatly inflated, only excavating soil that exceeds five times that is allowing for the vast majority of the contamination to persist. This too, is excluded from any review.

Soil and Asphalt Covers

One variant of an IC is a cover, comprised of either soil or asphalt. The soil covers, which are only 2 or 3 feet thick, are meant to cover the radioactively or chemically contaminated soil which stays in place just beneath them. Substantive evaluation of these covers, as in their effectiveness in protecting human and ecosystem health, their lifespan, and their potential failures long-term is not addressed in the review. Evaluation of soil covers is limited to a statement which states that, holes, animal burrows, and failed revegetation attempts have been observed. It is then asserted without basis that such problems would not compromise the protectiveness of the cover. There is no analysis of whether just covering up rather than contamination is truly protective, particularly over the lifetime of the contaminants, based on the most current information.

Conclusion

The draft Five-Year Review is fundamentally flawed, both in its content and in what it has failed to include. It should be redone to correct these serious problems and reissued for review and comment by the public and the regulatory agencies.

Environmental Law and Justice Clinic

TO: Derek Robinson, HPNS BRAC Environmental Coordinator
Department of the Navy
BRAC Program Management Office West
[REDACTED]

FROM: Greenaction for Health and Environmental Justice
Environmental Law and Justice Clinic, Golden Gate University
School of Law

RE: Comments to the *Draft 5 Year Review Hunters Point Naval Shipyard, San Francisco, California, June 2018*

DATE: September 7, 2018

I. INTRODUCTION

The Environmental Law and Justice Clinic of the Golden Gate University School of Law submits these comments to NAVFAC's *Draft Parcel G Removal Site Evaluation Work Plan, Former Hunters Point Naval Shipyard, San Francisco, California, June 2018* ("Draft Review"), on behalf of Greenaction for Health and Environmental Justice ("Greenaction") and its members and constituents in Bayview Hunters Point, San Francisco and in other communities located along San Francisco Bay.

Greenaction is a multiracial grassroots organization founded and led by grassroots leaders from low-income and working class urban, rural, and indigenous communities. Our mission to fight environmental racism and injustice and build a clean, healthy and just future for all. Greenaction has been involved in health and environmental justice advocacy in Bayview Hunters Point since it was founded in 1997. This low-income community of color continues to be negatively and disproportionately impacted by pollution, gentrification, health disparities, and other forms of environmental, social and economic injustice.

Mailing Address:

[REDACTED]
San Francisco, CA
[REDACTED]

Offices:

[REDACTED]
San Francisco, CA
[REDACTED]

Bayview Hunters Point residents have borne the brunt of the impacts of the toxic and radioactive waste at the Hunters Point Naval Shipyard ("HPNS"). As such, they have a direct, personal and long-standing interest in assuring the maximal cleanup of the Superfund site.

A. The Community Doubts the Navy's Commitment To Rebuilding Trust

"The fraud and uncertainty surrounding Tetra Tech's work at HPNS has caused a complete loss of trust in the Navy by the local community."¹ This is not a member of Greenaction speaking. This is the Navy's Laura Duchnak, BRAC PMO's Director. She's right.

Unfortunately, though the Navy acknowledges it has lost all credibility, it remains adamant that it will do nothing to address or correct it. It continues to downplay the fraud and its effects on the cleanup. It promises one thing but delivers another. It has not taken the evidence of previous contamination in Parcel A at all seriously.

If the Navy truly wants to start to repair relations with the community, it must take actions that demonstrate in concrete terms how it will change its approach. This is not just another cleanup; it's a cleanup tainted by massive fraud.

As Ms. Duchnak's letter said, the fraud "had far-reaching consequences for the United States, its employees, the City of San Francisco, the local residents, and the taxpayers." The Navy should act like it. The loss of trust extends to the hazardous waste cleanup as well.

The revisions of the *Draft Parcel G Work Plan* and this *Draft Review* are likely to be the first two tests of the Navy's willingness to change course. Will it live up to the promises it made to the community to resample all Tetra Tech's work? Will it incorporate

¹ *Victim Impact Statement in the Matter of US v. Hubbard*, March 15, 2018, attached as Appendix IV.

the community's concerns into its final work plan and five-year review? Or will it betray the community's trust yet again?

B. The *Draft Review* Does Not Comply with Navy Policy

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA § 121(c)) sets forth the requirement for a five-year review:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

Similarly, Title 40 Code of Federal Regulations §300.430(f)(4)(ii)] states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

To implement five-year reviews at properties owned by the Navy, it promulgated a policy, *Department of Navy Policy for CERCLA Five-Year Reviews*.

This Fourth Five-Year Review states its objective: "The purpose of the fourth five-year review is to provide an update on the status of remedial actions (RAs) and post-RA activities implemented since the third five-year review, evaluate whether these RAs and post-RA activities are protective of human health and the environment,

and assess the progress toward meeting the recommendations made in the third five-year review.”²

Unfortunately the *Draft Review* neither complies with the *Department of Navy Policy for CERCLA Five-Year Reviews* nor the intention stated above. For example, paragraph 9a of the policy states, “The Five Year Report should; 1) clearly state whether the remedy is or is expected to be protective, 2) document any deficiencies identified during the review, and 3) recommend specific actions to ensure that a remedy will be or will continue to be protective.” (Emphasis added, p. 4).

As further detailed below, the *Draft Review* fails in its most basic function – identifying whether the remedies are protective. Rather, it equivocates. *The Draft Review* must clearly state that the radiological remedies are NOT currently protective. And if the Navy states that the remedies “will be” protective, it should detail what “specific actions” will be taken, parcel by parcel, to assure that will be the case, as required by Navy policy.

Furthermore, the policy’s paragraph 9b states, “Where necessary, five year review reports should contain descriptions of follow up actions needed to achieve, or to continue to ensure protectiveness. Along with these recommendations, the report should list a timetable for performing the actions...”

The *Draft Review* fails to contain descriptions of the specific actions the Navy will take to achieve protectiveness. All it says is that the Navy intends to kick that can down the road until 2023. There is no explanation why what the Navy knows now is excluded; it must be included.

The Navy must revise the *Draft Review* to comply with CERCLA’s plain language and to comply with its own policies.

² *Draft 5 Year Review Hunters Point Naval Shipyard, San Francisco, California*, June 2018, p. 1-1.

II. RADIOLOGICAL – General Comments

A. Facts – The Navy Must Tell the Whole Truth

The *Draft Review* is similar to the *Draft Parcel G Work Plan* before it in the way it: mischaracterizes the facts; minimizes the effects of Tetra Tech's radiological fraud and its impact on the remediation; and abandons its public promises.

Emblematic of the Navy's recasting of facts are these remarkable assertions:

The Navy has completed an extensive review of the radiological remediation documents and data as part of its evaluation of the potential contractor manipulation and/or falsification of data and has identified the areas where resurveying for radionuclides is required to address all issues discovered during the Navy's evaluation. Any available information on the status of the review and discoveries made by the Navy were considered during the development of this five-year review. (p. 5-3.)

The Navy pretends it proactively has done everything it can to investigate and redress the fraud, when nothing could be further from the truth. The Navy makes it plain in this review that it still does not believe comprehensive sampling is necessary. Crucially, the Navy actions were limited to a document review – Tetra Tech's discredited documents, no less.³ Only when one parses the paragraph can one see the Navy's true intentions.

Start with the phrase, "potential contractor manipulation and/or falsification of data." Despite numerous sworn whistleblower affidavits attesting to widespread fraud, despite the Navy's own data review revealing evidence of fraud in approximately 40% of samples in Parcels B and G, despite the EPA finding that the Navy's data review missed about half the data problems,⁴ and despite two criminal convictions of Tetra Tech supervisors – the very supervisors identified as culpable in the whistleblowers' testimony – the Navy still insists the fraud was "potential."

³ The Navy has provided only two of the 117 Tetra Tech documents listed in the *Draft Review's* "References." See Section IIC below.

⁴ The contractor(s) that missed half the data problems have demonstrated their undependability. The Navy should commit to obtaining different contractors that the Navy, the community and the regulators can have confidence in.

The Navy claims it “has identified the areas where resurveying for radionuclides is required to address all issues discovered during the Navy’s evaluation.” That is simply false, unless by “all areas” the Navy means all of Parcels A, B, C, D, E, G, UC-1, UC-2 and UC-3. If the Navy truly has identified answers to all issues arising from the Tetra Tech Fraud, why are they not included in the Draft Review? The Navy should identify “the areas where resurveying for radionuclides is required” on maps of each parcel. (Also see section III (I) below regarding Figure 3-13.)

So far the Navy has proposed resurveying only in one Parcel, Parcel G. The *Draft Work Plan* for that project was so roundly criticized by comments made to it by EPA that it was unresponsive to its concerns that it threatens to invoke the dispute-resolution clauses of the Federal Facilities Agreement (FFA) if the Navy continues to ignore them: “Without the requested changes, the approach will not provide the necessary confidence level to establish when Parcel G would be suitable for redevelopment, and EPA may invoke the dispute resolution process described in the FFA.”

Then the Navy claims “any available information” was considered, but only “any available information” from the data review, that is, any available Tetra Tech data. Pointedly, the Navy cannot claim that it considered “any available information” without that tremendously narrowing qualification.

Among the “available information” the Navy ignores are: all of the whistleblowers’ sworn statements filed in support of Greenaction’s state and federal petitions to revoke Tetra Tech’s licenses;⁵ eyewitness and documentary evidence, including sampling documents and test results demonstrating there were elevated levels of radionuclides in Parcel A’s sanitary and storm water sewer systems that should have been investigated but never were;⁶ lists of approximately 50 additional witnesses who the Navy should interview;⁷ and BRAC’s own victim impact statement in the criminal cases

⁵ The federal petition and its supporting documents are incorporated herein and are available at: https://www.dropbox.com/sh/1gfn7ja0fc3c5l6/AAD7-9qzmbhhUTkGvpN4p_Xua?dl=0. The state petition and its supporting documents are incorporated herein and are available at: https://www.dropbox.com/sh/zh2pknpvgvuucjp0/AAA-1xjCHxjVtQ_s8wvTpm9Za?dl=0.

⁶ See Appendix VI, Rad Survey Results.

⁷ See Appendix VII, emails from ELJC to the Navy.

against Tetra Tech's former supervisor Justin Hubbard. In a March 15, 2018 letter, Laura Duchnak, the Director of BRAC PMO, wrote of the impact of Tetra Tech's fraud:

The redevelopment of HPNS was supposed to revitalize the community and provide jobs and affordable housing; all of that is now on hold indefinitely as the Navy and the regulatory agencies have determined that TtEC's work is unreliable.

The total cost for the database evaluation, work plan preparation, and preliminary field work *is* approximately \$8.8M.... The EPA has indicated that it would require all work to be re-performed as originally contracted. However, these discussions are not final. The Navy's best estimates for required re-work costs currently range from \$100M to \$300M.

In sum, the Navy has expended \$272.8 M to date paying TtEC for their work at HPNS, identifying the fraud, and taking measures to prevent further fraud. Depending on the cost of required re-work, this number will certainly rise to \$372.8 M and is likely to rise as high as \$572.8 M. This amount of money would buy a new Littoral Combat ship. It is nearly half of the Navy's total expenditures for *all* environmental clean-up activities at HPNS through fiscal year 2017 (\$991.1 M).

Mr. Hubbard's actions had far-reaching consequences for the United States, its employees, the City of San Francisco, the local residents, and the taxpayers.⁸

Ms. Duchnak does not discuss "potential" fraud. It is actual and extensive. The more the Navy soft-pedals the fraud, the less credibility it has. If the fraud is real enough to have had the effect Ms. Duchnak describes, it is well past time for the Navy to drop references to "potential" fraud.

⁸ See Appendix IV.

Finally, the Navy claims credit for “discoveries made by the Navy.” The Navy did make one important discovery, it’s true. Its employee flagged the low Potassium-40 (K-40) data that first raised the issue of fraud. But after that, the Navy closed its “eyes” and “ears.” It made no further “discoveries.” Rather, it ignored them.

In June 2016, for example, Anthony Smith, one of the whistleblowers, took the Navy and regulators on a tour of the shipyard during which he detailed some of the fraudulent activities he participated in. The Navy has never, to this day, spoken to him to follow up.

More than a year before this *Draft Review* was released, on June 29, 2017, Greenaction filed its NRC Petition seeking to revoke Tetra Tech’s federal license, supported by affidavits signed under penalty of perjury by numerous former radiation workers at HPNS who have come forth to blow the whistle on Tetra Tech’s fraud and the Navy’s complicity in it. They detailed six types of fraud: (1) fake sampling, in which soil samples were reported to have been taken at one location when they were actually taken from another; (2) samples and their analytical results were discarded because they came back too “hot;” (3) scanning data were altered to make them appear acceptable; (4) building survey data were fabricated; (5) radioactive material in soil was inadequately remediated, resulting in potentially contaminated soil being used as backfill for trenches at the Shipyard; and (6) Portal Monitor procedures were altered resulting in potentially radioactively-contaminated soil being allowed to be shipped offsite to points unknown.⁹

Greenaction obtained sworn affidavits from Archie Jackson, Bert Bowers, Susan Andrews, Arthur Jahr, Richard Stoney and Robert McLean, each of whom documented improper activities. Their statements are readily available, as they are exhibits in support of its June 2017 NRC Petition. Greenaction has repeatedly urged the Navy to interview them. The Navy has never, to this day, done so. Sadly, Mr. Jahr has since passed away; any untapped knowledge he may have had is now gone forever.

⁹ See NRC Petition, p. 1.

Greenaction also provided the Navy with two lists of additional witnesses, totaling approximately 50 people. The Navy ignored them. To the best of our knowledge, none of these witnesses have ever been contacted, despite more than a year's urging that the Navy interview them.

Instead of doing what was called for – investigating the full extent of the fraud's impact on the cleanup – the Navy allowed Tetra Tech to *investigate itself*, and accepted its self-serving and false claims the fraud was minimal and closed its eyes and ears to the whistleblowers.

Rather than conduct a meaningful investigation, the Navy spent months and \$8.8 million, according to Ms. Duchnak, on a "data review," whose purpose was not to find if more fraud took place, but rather to statistically validate Tetra Tech's bogus data. However, in results that were hugely surprising to the Navy but to no one else who has followed the disastrous radiation remediation, the data review not only supported the whistleblowers' testimony, it found much more evidence of potential fraud than even the whistleblowers said – approximately 40%!

Even these remarkable findings underplayed the full extent of the evidence of fraud. The EPA's review of precisely the same data found more than double the data problems the Navy did. EPA's review of data from Parcel G trench units, for example, found a whopping 97% of the data were questionable – virtually all of it.

In addition, two Tetra Tech supervisors have pled guilty to federal charges arising from their role in the fraud and are currently serving eight-month sentences. More charges may be forthcoming.

Despite the plethora of proof, however, the Navy continues to treat the proven facts as mere allegations. Two years ago they were allegations. In the ensuing time those allegations have been proven.

Forced to confront irrefutable proof dashing the Navy's hope that Tetra Tech's data was salvageable, in December 2017 it finally announced the inevitable conclusion it

had been seeking to avoid all along; all of Tetra Tech's data has to be thrown out. The Navy's point man on the project, Derek Robinson, promised multiple times publicly that all Tetra Tech's work would be redone, starting with resampling all locations where the fraudulent firm worked.

EPA heard the same promises Greenaction members did. Here's how Lily Lee, the EPA's HPNS Site Manager described what the Navy said in her interview for the *Draft Review*: "*The Navy, as the lead on cleanup, has responded through a comprehensive radiological data evaluation, increased oversight of ongoing radiological work, development of plans to resample all radiological survey units on site that involved Tetra Tech EC Inc., and increased community involvement outreach.*" (Italics in original, underline added.) Similarly, as Angeles Herrera, the Assistant Director of EPA's Superfund Division, Federal Facility and Site Cleanup Branch, wrote in his August 14, 2018 transmittal letter of the EPA's comments to the *Draft Parcel G Work Plan*, "The Navy has agreed to retest all of the survey units where Tetra Tech EC Inc. did previous radiological work." (Emphasis added.)

"Resample all survey units" was what the Navy promised.

As we pointed out in our comments to the *Draft Parcel G Work Plan*, the Navy has once again demonstrated that its promises are false. Rather than live up to its promises, the Navy's draft plan only intends to resample a small percentage of survey units. It must not be allowed to get away with reneging on its promises when it comes to either the *Parcel G Work Plan* or this *Draft Review*: it must commit to resampling all Tetra Tech's work.

This *Draft Review*, however, fails to even acknowledge the *Draft Parcel G Work Plan* exists, let alone disclose the extremely limited sampling and scanning it contemplates.

This *Draft Review* was published more than six months after the Navy finally abandoned its efforts to salvage Tetra Tech's data through its data review. Yet there is scant mention of the sequence of events leading to the status that is supposed to be

reported in a Five-Year Review. No mention that the fraud was discovered in 2012. No mention that Tetra Tech admitted to fraud in 2014. No mention that whistleblowers came forward in 2016. No mention of their testimony proving widespread fraud. No mention that the Navy believed a fraudulent firm more than whistleblowers' statements under oath. No mention of the disastrous (to the Navy) results of the data review. No mention of EPA's finding that the Navy's data review missed half the data problems. No mention that the Navy has admitted all Tetra Tech's data is being thrown out. No mention of the Navy's public promises to finally own up to the fraud and do what should have been clear from the beginning; start over. No mention that the Navy's *Draft Parcel G Work Plan* reneges on the Navy's multiple promises to retest all Tetra Tech's work and only test one-third of the trench units and one-half of the buildings.

Here is the bureaucratese the Navy employs instead, using Parcel B-1 as an example: "The remedies completed to date for Parcel B-1 are protective of human health and the environment, noting that the radiological removal actions are being retested." Identical language is used in Section 8, Protectiveness Statement, for Parcels B-2 C, D-2, E, G, UC-1, UC-2 and UC-3.

These statements are false. Given that the Navy has publicly and repeatedly stated it will no longer rely on any Tetra Tech data, there is no factual basis for claiming the radiological remedies "completed" by Tetra Tech are "protective of human health and the environment." This can only be true if the Navy relies on Tetra Tech's discredited data — data even the Navy now agrees, however reluctantly, is useless. As we return to in our comments on Protectiveness Statements (see section II G below), the only accurate answer to the question of protectiveness is "no". There are no data demonstrating protectiveness whatsoever. Unless and until all of Tetra Tech's work is properly and comprehensively resampled and, where necessary, re-remediated, the Navy cannot claim radiological protectiveness.

The phrase, "noting that the radiological removal actions are being retested," does not substitute for the Navy's duty to be factually accurate in its Statement of Protectiveness. "Noting" that all of Tetra Tech's work must be redone is like saying that

the Navy's oversight was exemplary, "noting that the Navy squandered more than \$200 million and more than a decade."

The Navy must not be allowed to mislead the public and regulators by dismissing the fraud's impact on the cleanup anymore.

B. Parcel A

The *Draft Review* completely excludes Parcel A: "Parcel A is not discussed in this report because the parcel required no action under CERCLA." (p.1-2). The reason Parcel A "required no action under CERCLA" is because the Navy did an incompetent job investigating the possibility of radiological contamination there.

Earlier this year, Greenaction brought forth both eyewitness and documentary evidence – including sample results – proving the original Parcel A storm water and sanitary sewer systems contained elevated levels of radionuclides that should have been investigated but never were. Greenaction has requested that the Navy and regulators report all information they have concerning what happened to the Parcel A sewers and their associated soils. The sewer pipes may have been disposed of illegally; it is so far unknown whether contaminated pipes were disposed of at facilities not licensed for radioactive waste. Greenaction has developed information indicating the soils from the Parcel A sewer systems were essentially "pushed over" the hill atop Parcel A into neighboring locations as part of grading Parcel A prior to development. We have asked both EPA and the Navy to investigate. So far as we know, both have flatly refused.

A description of an investigation of Parcel A's sewer systems and associated soils must be added into the *Draft Review*.

C. Reliance on Tetra Tech Data

The Navy improperly continues to rely on Tetra Tech data for the Five-Year Review despite already agreeing to discard it. The Index of the review lists 117 Tetra Tech, EC Inc. documents, 91 of which are entitled either "Final" or "Final Final" status

surveys, none of which have been made available to the public. Greenaction has requested these documents in writing but the Navy refuses to provide them. Accordingly, Greenaction has requested them through a Freedom of Information (FOIA) request.

There are no rational reasons the Navy should rely on or cite any of Tetra Tech's discredited data for any purpose. The *Draft Review* should be scrubbed of all Tetra Tech radiological data; all Tetra Tech documents listed in the References should be excised.

D. Investigating Soil That Was Improperly Allowed to Leave HPNS

Greenaction has provided credible evidence to the Navy that soil, improperly scanned at Radiological Screening Yard ("RSY") pads or the Portal Monitor, or both, resulted in a significant amount of potentially radiologically contaminated soil being permitted to exit Hunters Point Naval Shipyard improperly. Some of the soil was allegedly disposed of at landfills not licensed for low-level radioactive waste around the San Francisco Bay Area. (See NRC Petition, pp. 22-25.)

It is incumbent on the Navy to track down that soil and take appropriate actions to insure that unwitting people are not exposed to radioactive contamination that originated at HPNS. The *Draft Review* should include a statement that the Navy will investigate and will publish a plan to do so that will be open to public comment.

III. RADIOLOGICAL COMMENTS - Specific

A. Section 1 – Introduction

The Introduction kicks off the litany of half-truths that litter the Navy's *Draft Review*. It claims it, "identifies issues found during this fourth five-year review and recommendations to address them."

In addition to the issues already mention in section IA above, the *Draft Review* elides the Navy's own lack of oversight in permitting the fraud to take place under its nose for years, and the regulatory agencies' failures of oversight as well. The Navy should own up to the ugly truth, not attempt to bury it.

B. Section 2 – Site Background

Section 2.5.2 of the *Draft Review*, Future Land Uses, fails to acknowledge that during the five-year review period the proposed use of Parcel G was changed from almost no residential use to the entire parcel being open to residential use. Nowhere in the *Draft Review* is there are discussion of how this changed use will impact the remediation.¹⁰

C. Section 3 – Response Action Summary

The introduction to Section 3 states that Section 3, among other things, “describes the implementation status of the selected remedy for each parcel.” (p. 3-1). But this is manifestly untrue when it comes to the radiological remedies.

The *Draft Review* provides virtually no information about the status of the re-investigation of Tetra Tech’s work. Although the Navy released a *Draft Parcel G Work Plan* in June 2018, a month before the release of the *Draft Review*, there is not a single mention of it.

The information about the other parcels is just as scant. Although the Navy announced publicly at the end of 2017 that all of Tetra Tech’s work would be redone, the *Draft Review* says absolutely nothing about when draft work plans for the other parcels will be released; what the resampling strategies will be; a timeline for all such actions; or anything else.

The only thing the *Draft Review* says is that “All radiological work is currently being reviewed to determine if current site conditions are compliant with the RAOs.” (Section 3.3.2.1, p. 3-12, for parcel B, for example). What the “review” consists of is not addressed, as if the Navy has no idea what to do and as if it hasn’t already decided exactly what to do.

The Navy must acknowledge the truth; none of the sites Tetra Tech worked on are compliant with the RAOs. The Navy must also abide by what it has promised publicly in

¹⁰ *Feasibility Assessment for Evaluating Areas with Residential Land Use Restrictions, Parcel G, Hunters Point Naval Shipyard*, San Francisco, California, Nov. 30, 2016.

more than one forum: all Tetra Tech's data have to be thrown out and the Navy must start over. All areas Tetra Tech worked on have to be resampled and if necessary, re-remediated, as the Navy has promised.

While the *Draft Review* omits essential information, it includes irrelevant data as if it were "factual." For example, the Navy congratulates itself on all the work that has been done; in Parcel C, for example, the Navy touts all that was accomplished: "Radiological surveys and remediation have been performed for all radiologically impacted buildings (203, 205 and discharge tunnel, 211, 214, 224, 241, 253, 271, and 272), storm drains, and sanitary sewers, except for Buildings 211 and 253. In total, 37,572 cubic yards of soil was removed from 19,260 linear feet of sanitary sewer and storm drain lines; approximately 987 cubic yards of soil was disposed off site as LLRW (TtEC, 2016d)." (p. 3-18.) Similar summaries are included as to the other parcels as well.

But all that work was done by Tetra Tech. None of the work they claim to have done can be relied on. It all has to be resampled. So why does the Navy list these actions as if they were accomplishments? They are not. Instead, the Navy's summaries of how much dirt was moved, how many buildings were scanned, etc., only serve to illustrate the enormous impact of the fraud on the cleanup. What the Navy fails to say is that each and every one of those "accomplishments" are useless because Tetra Tech's data are useless.

These so-called accomplishments should be removed from the *Draft Review*. They have no relevance to assuring protectiveness.

D. Section 4 – Progress Since Last Review

Failure to address the Tetra Tech fraud in this, the *Draft Fourth Five-Year Review*, continues its omission in the *Third Five-Year Review* ("*Third Review*"), completed in November 2013. The original suspicions about Tetra Tech were raised a year before, in 2012. Yet nowhere in the *Third Review* is there the slightest hint that Tetra Tech's data might be fraudulent. None of the recommendations for any of the parcels in the *Third Review* include any mention of the discovery of the fraud or what the Navy did about it

between its discovery and the release of the *Third Review*. The Third Review included no recommendations at all concerning the fraud the Navy already knew about.

In Parcel D-2, for example, the *Third Five-Year Review* omitted a protectiveness statement “because the parcel was deemed to require no further action following completion of radiological remediation.” (4.5, p. 4-3). But all Tetra Tech’s data should have been suspect in 2012, calling into question the “completion of radiological remediation.”

When it comes to the radiological fraud, the Navy played “hide the ball” in 2013 and obviously intends no change now. The Navy must be required to tell the whole truth about the radiological disaster it allowed to happen. It must not be allowed to dodge the truth or its responsibility any longer.

E. Section 5 – Five-Year Review Process

Section 5.2, Document and Data Review, states, “As part of this five-year review, documents and data related to remedy implementation were reviewed for each parcel. The reviews primarily focused on (1) documents and data that provide information on the technical and regulatory considerations that led to remedy selection and implementation, (2) documents that demonstrate remedy completion, and (3) documents and parcel-specific data that demonstrate the remedies continue to be protective of human health and the environment.” (p. 5-2.)

This is a microcosm of all that is wrong with the Navy’s approach to the post-Tetra Tech period. The Navy admits it doesn’t take a dispassionate, objective view. It focuses on “documents that demonstrate remedy completion.” It should be focusing on all relevant documents and data, whether they demonstrate compliance or not, especially if not.

And, when it comes to Tetra Tech’s work, “parcel-specific data that demonstrate the remedies continue to be protective” are non-existent. It’s all unreliable. None can demonstrate protectiveness or anything else.

Furthermore, the Fourth Five Year Review fails to look forward. It must discuss the need to amend all the existing RODs as they relate to radiological contamination, and Parcels E and E-2 for chemical contaminants. The current five year review process is the appropriate place to discuss the need for ROD amendments to account for new circumstances.

In fact, the Navy has done precisely that in the past. For example, it discussed the possibility of an amendment to the Parcel B ROD in the First Five Year Review: “The future RA process for Parcel B could include a technical memorandum in support of a ROD amendment, a proposed plan (with community involvement), a ROD amendment, RD, and RA, followed by closeout activities.” The Parcel B ROD was eventually amended, in part because of the recommendation made in the first review:

In 2007-2008, the Navy prepared two technical memoranda...in support of amending the ROD as recommended by the First 5-year review. These memoranda provided the technical foundation for identification of revised remedial alternatives and preparation of a proposed plan and subsequent amended ROD for Parcel B. (Second Five Year Review at 3.5.8).

The *Draft Review* should provide recommendations for the steps to be taken in the coming five years, informed by which new information that was not considered when the RODs were approved.

F. Section 6 – Technical Assessment

The *Draft Review* is internally inconsistent. For example, Section 6 states, “Published documents report the completion of radiological surveys and remediation in IR-07/18 and Parcels B-1, B-2, C, D-1, D-2, E, G, UC-1, UC-2, and UC-3.” (p. 6-6.)

Section 6.1.6, Radiological Surveys and Remediation, asks, “*Are the radiological surveys and remediation remedies implemented in IR-07/18 and Parcels B-1, B-2, C, D-1, D-2, E, G, UC-1, UC-2, and UC-3 functioning as intended by the decision documents?* YES (for IR-07/18 and Parcel D-1); NO (for Parcels B-1, B-2, C, D-2, E, G, UC-1, UC-2, and UC-3).P. 6-6).

Again, the Navy cannot claim that remediation has been “completed” but in the next breath admit, “Well, not really.” Having determined under public pressure and the insistence of the EPA that all Tetra Tech data are unreliable, the Navy must drop any pretense that radiological work was “completed.” The *Draft Review* should consistently say that none of Tetra Tech’s work was “completed” and that the remedies it implemented are not protective.

As stated above, The Navy downplays the fraud throughout, including in Section 6. For example, it states, “In January 2018, the Navy determined that a significant portion of the radiological survey and remediation work completed to date was compromised by potential manipulation and/or falsification of data by one of its radiological remediation contractors. Compromised data were identified in reports associated with Parcels B-1, B-2, C, D-2, E, G, UC-1, UC-2, and UC-3. Again, this is an understatement. “A significant portion” of Tetra Tech’s data was not compromised; all of it was. And characterizing the fraud as “potential” is belied by the facts, including those provided by BRAC’s boss. It is past time for the Navy to stop denying that the fraud actually took place.

In Section 6.2.3, Changes in Risk Assessment Methods, the Navy claims it can substitute a 2014 EPA supplemental guidance in place of the risk assessment and, without proof, further claims equivalency: “Use of these updated default exposure parameters in place of the original values used in the risk assessments for each of the parcels primarily results in increasing the RBCs for the adult receptors. The increase is not significantly different from the values estimated in the original risk assessments. As such, EPA changes to default exposure parameters do not affect the protectiveness of the remedies.” (p. 6-12.)

However, as the EPA made quite clear in its comments to the *Draft Parcel G Work Plan*, this substitution is improper; it impermissibly changes the ROD:

At this stage of the CERCLA process, the cleanup goals have already been legally established. A new Radiation Risk Assessment is ordinarily only performed as part of a Five-Year Review to evaluate whether or not the original RG's are still protective. EPA has separately recommended that the Navy conduct this review, and, if any of the RGs are found to be no longer protective using the most current risk calculators, propose amendments to the Parcel G ROD to ensure protectiveness. For the current work plan, however, the current RGs still govern the cleanup and if any material is found on Parcel G that exceeds the RGs established in the Parcel G ROD for the ROCs, excluding naturally occurring and anthropogenic background, the material should be removed and disposed of in accordance with the ROD and other applicable laws and regulations. (p.3.)

On the other hand, Greenaction would welcome it if the Navy did formally what it is attempting to do by sleight of hand -- reopen the ROD to include newer, more protective standards. We urge the Navy to accept EPA's suggestion that as part of the five-year review, it formally reassess the standards set in the nine-year-old ROD to make them more protective.

G. Section 7- Issues Recommendations and Other Findings

The *Draft Review* claims in Section 7 that, "It is anticipated that the radiological rework will span 5 years and be completed prior to the next five-year review." (p. 7-2.) This is yet another example of the Navy's wishful thinking. Consider that: the Navy claims it can redo more than a decade's work by Tetra Tech in less than half that time; to date the Navy still has not obtained an approved work plan for even a single parcel that needs to be reworked, nine months after the Navy finally acknowledged it would be necessary; and the Navy includes no timeline whatsoever detailing what activities will take place or when. Finally, consider this statement from Ms. Duchnak's victim impact statement: "The Navy estimates that the fraud committed by Mr. Hubbard and others has set back the planned transfer of HPNS property to the City by an approximate decade."

The Navy needs to stop stating hope as fact. It cannot claim in the *Draft Review* that the project will be delayed five years, when BRAC's boss says it will be double that.

It is this kind of transparently false optimism that continues to taint the Navy's relations with the community.

Section 7 also states that the "Navy has determined that a significant portion" of Tetra Tech's data was compromised. (p. 7-2.) As mentioned before, this is, at best, an understatement. All of Tetra Tech's data are compromised. The Navy admitted that publicly more than nine months ago. The *Draft Review* must say that clearly and without evasion.

H. Section 8 - Protectiveness Statement

The *Draft Review* repeats the following uninformative statement it makes as to Parcel B-1: "The remedies completed to date for Parcel B-1 are protective of human health and the environment, noting that the radiological removal actions are being retested." (p. 8.1.) The identical language is used in reference to Parcels B-2, C, G, UC-1, UC-2 and UC-3. (pp. 8-1 through 8-4.)

The Five-Year Review must be factual. It must start by admitting the radiological remedies in those parcels are not currently protective. This is the inevitable conclusion of the EPA's critique of the Navy's data review. And it must acknowledge that the "radiological removal actions" will be retested, not that they "are being retested." The Navy has not obtained regulatory approval for any retesting yet. And if the Navy refuses to accede to the EPA suggestions in its comments to the *Draft Parcel G Work Plan*, any retesting may have to await completion of the FFA's mandated dispute resolution process, further delaying when the Navy can truthfully claim the parcels "are being retested." As stated above, the revised *Draft Review* should describe the radiological work the Navy intends to do in response to the fraud in each parcel, along with a timeline of activities.

The protectiveness statements for Parcels D-1 and D-2 are equally dishonest. The *Draft Review* says the remedy for D-1 "is expected to be protective." (p. 8-3.) Of course, the Navy has "expected" a lot that did not turn out to be true. It expected Tetra Tech to do a proper job. It expected that it had the capacity to adequately supervise Tetra Tech. It expected to obtain free clearance in multiple parcels by now. Regulators and the public

have no reason to believe that the Navy will meet its expectations – it has not so far and, if the *Draft Parcel G Work Plan* and the *Draft Review* are any indication, the Navy has learned nothing from the Tetra Tech fraud and will blithely continue as it has done so far.

As to Parcel D-2, the Navy follows the template it used in Section 3; cite all the “work” it has done and then add the *non sequitor*, “Radiological surveys and removal actions completed in Parcel D-2 were potentially compromised, and corrective actions are required to determine if the RAOs have been achieved.” It does not matter how many cubic yards of soil remediation were fraudulently “completed,” though it is instructive of the impact of the Navy allowing the fraud to take place over so many years.

I. Figures

Figures 3 through 13 are inaccurate. Each purports to show an “Overview of Remedy Components,” for a specific parcel. Yet none includes radiological components; none of the figure’s “legends” even reference radioactivity.

The Navy knows where Tetra Tech (as well as other radiological contractors) worked and can include such information. For example, the sewer systems have been identified as major radiological remediation sites. The Navy can and should include anticipated radiological work either in these figures or create separate radiological overviews of remedy components.

IV. NON-RADIOLOGICAL

A. The Draft Review Must Evaluate Protectiveness Consistent with Up-to-Date, Scientific Sea and Bay-Level Rise Projections

The *Draft Review* surprisingly and unacceptably fails to consider essential new data that was not available when the remedies were selected. The most important missing data are the latest scientific projections of sea-level rise. Because of the intense toxicity of the hazardous and radioactive wastes (including residue from atomic bomb testing) that current remedies leave capped onsite, and the persistence of

that toxicity, the Navy courts long-term disaster if its Bay-level rise assumptions are wrong. The *Draft Review* must not only evaluate protectiveness in light of estimates of Bay-level rise in the coming decades, but its threat from Bay-level rise centuries into the future as well. If the Navy is wrong now and global warming causes the Bay to rise enough to overwhelm current remedies, the health of nearby residents, subsistence fishers, people recreating on the proposed “open space” and the hundreds of thousands of people living along the San Francisco Bay will all be at unacceptable risk.

State of California governmental agencies have done extensive research, analysis and reporting on the latest projections for rising sea levels – yet the *Draft Review* appears to have ignored this important science.

The San Francisco Bay Conservation and Development Commission (BCDC) is a planning and regulatory agency with regional authority over San Francisco Bay, the Bay’s shoreline band, and the Suisun Marsh. BCDC was created in 1965 and is the nation’s oldest coastal zone regulatory agency. Its mission is to protect and enhance San Francisco Bay and to encourage the Bay’s responsible and productive use for this and future generations. BCDC leads the Bay Area’s ongoing multi-agency regional effort to address the impacts of rising sea level on shoreline communities and assets.

BCDC’s Adapting to Rising Tides project (ART) (<http://www.adaptingtorisingtides.org/>) started in 2010 when BCDC and NOAA’s Office for Coastal Management brought together local, regional, state and federal agencies and organizations as well as non-profit and private associations for a collaborative planning project along the Alameda County shoreline. The project worked to identify how anticipated current and future flooding associated with global warming will affect communities, infrastructure, ecosystems and the economy.

Since then, the ART has continued to both lead and support multi-sector and cross-jurisdictional projects that build both local and regional capacity in the Bay Area

to plan for and implement adaptation. These efforts have enabled ART to test and refine adaptation planning methods (ART Approach) to integrate sustainability and transparent decision-making from start to finish, and foster robust collaborations that lead to action on adaptation. BCDC has conducted extensive scientific research. Its sea level rise projections and mapping are widely accepted as sound by government agencies. Adapting to Rising Tides Bay Area Sea Level Rise Analysis and Mapping Project has the latest data that the Navy must use in development of revised remedies to continue to assure protectiveness into the future.¹¹

The State of California Ocean Protection Council's (OPC) *2018 State of California Sea Level Rise Guidance* is also vitally important to consider in developing safe remedies.¹²

The 2018 update of the Guidance was created by the OPC, California Natural Resources Agency, Governor's Office of Planning and Research, and the California Energy Commission. The Guidance provides the best available data on sea level rise projections for California which should be used by state agencies and local governments in their planning, permitting, and investment decisions.

The Remediation Design for Parcel E-2 is deficient given updated sea level rise projections. In Section 6.3 (Technical Assessment Question C, pp. 6-15), the *Draft Review* states:

The estimated sea-level rise in San Francisco under three future greenhouse gas emission scenarios (referred to as representative concentration pathways [RCPs]) is summarized below:

- RCP 8.5 is consistent with a future in which there are no significant global efforts to limit or reduce emissions. In 2100, the likely sea-level rise associated with this scenario ranges from 1.6 to 3.4 feet.

¹¹ See <http://www.adaptingtorisingtides.org/project/regional-sea-level-rise-mapping-and-shoreline-analysis/> and <http://www.adaptingtorisingtides.org/wp-content/uploads/2018/07/BATA-ART-SLR-Analysis-and-Mapping-Report-Final-20170908.pdf>

¹² http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf

- RCP 4.5 is a moderate emissions reduction scenario and assumes that global greenhouse gas emissions will be curtailed. In 2100, the likely sea-level rise associated with this scenario ranges from 1.2 to 2.7 feet.
- RCP 2.6 is a stringent emissions reduction scenario and assumes that global greenhouse gas emissions will be significantly curtailed. In 2100, the likely sea-level rise associated with this scenario ranges from 1.0 to 2.4 feet.

Based on the information above, a contingency of up to a 3-foot increase in sea level was considered in designing the crest elevation for Parcels E and E-2.

No other information has been identified to suggest that the remedies may not be protective of human health or the environment. (p. 6-15.)

The assumption greenhouse gas emissions will curtail is speculative at best, and should not be used as a guideline in remediation planning. This is especially true with the current EPA's efforts to abandon stringent greenhouse gas and other emissions limits from coal fired power plants and other industries.

BCDC's "Adapting to Rising Tides Bay Area Sea Level Rise Analysis and Mapping Project" outlines a range of likely sea level rise scenarios (see Appendix III, p. 13). The upper bound of these scenarios is 5.5 feet (66 inches) sea level rise by the year 2100. Adapting to Rising Tides also considers a 100-year extreme tide (see appendix III, p. 15), which is the coastal water level elevation that has a 1 percent chance of occurring in any given year. A 5.5 feet (66 inches) sea level rise with the 100-year extreme tide would create a tide 9 feet (108 inches) above Mean Higher High Water (MHHW, the average of the high water mark of each tidal day observed over the National Tidal Datum Epoch).

Even minimal risk of catastrophic events must be considered and planned for due to the dangerous radioactive and contamination in close proximity to people and the Bay.

According to the 2018 State of California Sea-Level Rise Guidance (Appendix II, p. 57):

- Sea level rise will reach 5.7 to 6.9 feet by 2100 under the medium to high risk aversion scenario.
- Sea level rise will reach 10.2 feet by 2100 under the H++ scenario (detailed below).

The 2018 State of California Sea-Level Rise Guidance suggests that projects with a lifespan beyond 2050, that have a low-tolerance for risk (i.e., hazardous waste & toxic storage sites) should use H++ scenario. H++ scenarios can be considered the “worst-case” possibility and describe an extreme sea level rise scenario that would result from a catastrophic event (i.e., the collapse of the West Antarctic ice sheet), especially under high emission scenarios. The projected sea level rise under the H++ scenario is 10.2 feet by 2100.

The projections used by the *Draft Review* are inadequate because they do not consider the most up to date sea level rise projections or consider a future in which emissions will increase. The State of California Sea Level Rise Guidance 2018 Update has estimated the chance of sea level rise meeting or exceeding various heights in various years (see Appendix I, p. 58). It estimates these percentages under two scenarios: one in a future with low carbon emissions and one in a future with high carbon emissions. The likeliness of sea level rise exceeding 3 feet by 2100 under a future with low emissions is 7%. The likeliness of sea level rise to exceed 3 feet by 2100 with high future emissions is 28%. So, the current design has a 7-28% chance of failure due to sea level rise by 2100, depending on the future carbon emissions. This risk is unacceptable.

The risk of flooding and inundation is especially important for Parcel E-2, due to its history of disposal of hazardous and radioactive waste. According to *Adapting to Rising Tides*, Sea level rise and storm events may cause flooding or groundwater intrusion to contaminated sites and landfill waste containment systems. Temporary or permanent surface flooding, erosive tidal or wave energy, and elevated groundwater levels could cause the release of

hazardous substances with potentially significant consequences on public health, the environment, and the local economy.¹³

The release of any amount of toxic or radioactive substances in Hunters Point would be detrimental because the community is already disproportionately burdened by a multitude of environmental hazards, and would have a significant negative impact on the entire Bay ecosystem.

Both BCDC and the State of California Sea-Level Rise Guidance project sea level rise to surpass the 3-foot mark accounted for in the Navy's design considerations. Three feet above mean sea level is generally considered in the middle of the likely range of sea level rise by 2100. When planning for construction in an area that is as dangerous when flooded as Parcels E and E2 with all the toxic waste they contain, the upper bound of all sea level rise scenarios should be used, which according to BCDC is 9 feet and according to State of California Sea-Level Rise Guidance is 10.2 feet.

Accordingly, the remedies that could be affected by sea-level rise significantly higher than the unreasonably low assumptions made by the Navy must be reconsidered in this review.

A. Potential Flooding of the Revetment Wall Must Be Considered

As depicted in the Engineering/Remediation Resources Group, Inc.'s Shoreline Revetment Detail the highest point of the design is the concrete sea wall, standing at approximately 7 feet above mean sea level. This height is insufficient in light of current updated scientific sea level rise projections referenced above. Combined with the possibility of high tides, king tides, storm surges, wind driven waves and El Nino, all of the sea level rise possibilities outlined in the previous section indicate there is a strong likelihood of the currently designed sea wall flooding.

¹³ SF BCDC Adapting to Rising Tides. "Contaminated Lands", p. 1.
<http://www.adaptingtorisingtides.org/portfolio/contaminated-lands/>

Remedial design should reflect the possibility which would most effectively protect the residents of Bayview Hunters Point. Considering the catastrophic health hazards which could result from Parcel E-2 flooding, the H++ scenario should be used, accounting for sea level rise of 10.2 feet by 2100. In conclusion, the construction of a revetment sea wall at 7 foot is inadequate, and will likely expose additional contaminants to a community and San Francisco Bay that are already overburdened with multiple environmental hazards.

B. Concerns about Slurry Wall Construction

The *Draft Review* does not address the effect of sea level rise on slurry walls. As sea levels rise, the levels of ground water tables rise as well. Nor does it account for how the rise of groundwater will affect the integrity of the slurry walls. The design process seems to be using current groundwater levels, but not planning for new levels/flow directions/pressures. The effective life cycle of these slurry walls is not addressed, and if it is more than 10-15 years, which it well should be, these sea level rise outcomes should be a major design consideration. This also of course impacts the "remedy" of leaving contamination buried at the waterfront.

Constructing a slurry wall on fractured bedrock is a poorly engineered idea which fails to provide a long term solution. While the review indicates that the land is not an aquifer due to its limited flow capability, ineffectiveness remains. Regardless of the depth of the slurry wall, water will percolate through the cracks of the bedrock on which the slurry wall sits. This will enable the interaction of the contaminated landfill groundwater with both the San Francisco Bay water and surrounding uncontaminated groundwater.

The *Draft Review* additionally fails to address any seismic activity that may occur, which could both destroy the slurry wall and potentially further fracture the bedrock. This should be a major concern as San Francisco is right on the San Andreas

Fault and, is highly susceptible to major, potentially catastrophic earthquakes like the one on April 18, 1906.

The Navy's reliance on below-ground barriers and capping of contaminated soil with a few feet of barriers are not safe or sustainable remedies for the extremely contaminated land of Parcel-E and E 2. In particular, caps are extremely vulnerable to flooding with increased water levels caused by sea level rise.

C. The Slurry Wall Will Not Stop Rising Groundwater Inundation of Contamination

Increased water levels in the Bay and storm surges are not the only flooding and inundation threat to the "remedy" of leaving buried contaminated waste so close to the Bay. As sea levels rise, so will groundwater.

A study by the US Geological Survey and Yale University states "...as sea level rises, so will groundwater levels, and since underground infrastructure - including sewer pipes and utility equipment - was built with historical groundwater levels in mind, this could lead to expensive headaches for coastal communities."¹⁴

A slurry wall and capping on top of contamination will do nothing to prevent rising groundwater from inundating and potentially flooding the area, resulting in an environmental and health disaster.

D. The Vulnerability of Bayview Hunters Point Residents to Pollution Must Be Factored Into the Review

The Navy's remediation of the Shipyard Superfund Site must continue to be protective of health and the environment. It must be based on science and take into account the current reality of the health crisis and environmental conditions at and

¹⁴ <http://www.climatecentral.org/blogs/sea-level-rise-may-raise-groundwater-levels>

near the site, including Bayview Hunters Point, and how potential failure of remedies at the shipyard could significantly exacerbate them.

Unfortunately, the approved remedies do not take into consideration the well-documented health vulnerabilities of residents. Remedies must be based on facts, not on abstract “health” levels that are not appropriate for Bayview Hunters Point.

It is a well-established fact that Bayview Hunters Point is heavily impacted by decades of pollution from industry and the military, as well as from two freeways, the City’s main sewage treatment plant, dozens of contamination sites, freight transport, the Port of San Francisco, and under-regulated and unregulated businesses operating with little or no government oversight.

In January 2017, the Office of Environmental Health Hazard Assessment (OEHHA), on behalf of the California Environmental Protection Agency (CalEPA), released Version 3.0 of the California Communities Environmental Health Screening Tool (CalEnviroScreen). CalEnviroScreen identifies California communities by census tract that are disproportionately burdened by, and vulnerable to, multiple sources of pollution. CalEnviroScreen measures vulnerability through evaluating and quantifying pollution exposures, environmental effects, sensitive populations and socioeconomic factors.

CalEnviroScreen 3.0 found that BVHP is one of the communities in the entire state most at risk from pollution, and concluded that it has a higher pollution burden than 90% of the state.

CalEnviroScreen 3.0, quantifies this community’s significant exposure to environmental hazards, ranking it in the 99th percentile for diesel Particulate Matter, 98th percentile for groundwater threats, and 86th percentile for hazardous waste. It found BVHP to be in the 98th percentile for asthma.

Based on the facts regarding these significant and alarming vulnerabilities, the remedies set forth in the various RODs must be re-evaluated and new, more protective remedies adopted. The appropriate health protective remedies will require an expanded, comprehensive and safe cleanup and removal of as much of the hazardous and radioactive waste as possible from the site – not merely capping waste in place. Leaving radioactive and hazardous wastes buried at the Superfund Site, next to existing and proposed neighborhoods, under what is proposed to be recreational “open space,” and next to the San Francisco Bay waterfront threatened by rising sea levels – projected to be as more than 5 feet by 2100 under “moderate” assumptions and climbing even higher in future centuries – is purely reckless and unacceptable.

E. The Entire Shipyard Superfund Site and Adjacent Areas Must Be Comprehensively Retested, With Independent Community Oversight

The Navy must carry through with its public commitment to properly retest all areas, not just some areas, where Tetra Tech did radiological work at the Shipyard. The Navy and other government agencies must test the entire Shipyard Site and adjacent areas, including any locations that information provided by whistleblowers, residents and other reliable sources indicate may have been contaminated from Shipyard operations.

Scanning is insufficient and unacceptable if not combined with comprehensive core sampling. Testing must be thorough and comprehensive:

- a. Radiological core sampling must be conducted of the entire site and adjacent areas. It is imperative that all core samples go at least 9 feet beneath the surface, .
- b. The core sampling should create a 2m x 2m mapping grid,
- c. All core sampling must follow split sampling protocols.
- d. All ground water should be tested for radiation contamination, including aquifers A and B,

- e. The Navy must immediately begin working with the State of California and the Bay Area Air Quality Management District to develop and implement standards for fugitive radiological dust, and
- f. Radiologically contaminated soil should be marked with an orange colored dye. Applying this would explicitly identify important areas, help prevent accidental shipments of radioactive soil to landfills, and act as a dust suppression measure.

F. Land Use

Simply stated, kids and other residents should not live, work or play next to or on top of hazardous and radioactive waste. The effect of a botched and inadequate cleanup reverberate far beyond the shipyard, impacting nearby San Francisco neighborhoods, the Bay itself and all who enjoy it and rely upon it, including subsistence fishers, and communities along the Bay.

We call on the Navy and regulatory agencies to reconsider the RODs, as part of this five-year review, to incorporate newer and more protective cleanup standards and a comprehensive remediation.

B. CONCLUSION

The widespread fraud and botched cleanup, the lack of proper regulatory oversight, the lack of transparency and the government's inappropriate relationship with mega-developer Lennar/Five Points have undermined a proper cleanup of the contamination and resulted in the reckless and unscientific "remedies" being evaluated in the *Draft Review*. This is the time and process to re-evaluate the "remedies" because they:

- are not protective of public health or the environment,

- do not take into account the fact that Bayview Hunters Point residents have been found by the State of California to be highly at risk and vulnerable to pollution due to health, environmental and socio-economic indicators,
- endanger San Francisco Bay,
- are based in significant part on “data” produced by Tetra Tech despite the widespread fraud committed by that company during years of “remediation” work at the Superfund site,
- are not based on the pending large scale retesting of much of the Superfund Site which has not yet begun, and
- do not reflect latest scientific consensus on expected sea level rise due to climate change.

Our comments highlight serious flaws and omissions in the Navy’s review that must be corrected. These flaws include, among others, inadequate consideration of the impact of the radiological fraud on the cleanup and outdated assumptions which will particularly impact the large amounts of hazardous and radioactive waste buried at Parcel E-2; the *Draft Review’s* remedy analysis fails to adequately address rising sea levels due to climate change which threaten San Francisco Bay and its waterfront. The threat that rising Bay levels could inundate portions of the shipyard including Parcel E-2, as well as an inadequate revetment design that will not provide adequate protection from contaminants reaching the Bay are real and must be addressed.

The ROD remedies that are subject to the five-year review must be revised as part of this review process to incorporate the entirely foreseeable effects of significant new information, not available when the RODs were adopted. This includes the impact of the radiological fraud and the substantial and growing threat that Bay-level rise presents to the future integrity of remedies selected years ago.

We have already seen the consequences of the Navy’s failure to anticipate foreseeable risks. In August 2000, local residents observed strange-colored smoke from what appeared to be a fire burning underground in Parcel E-2. This subsurface

fire burned for months, with plumes of smoke readily visible to affected residents, some of whom report adverse respiratory affects. The smoke also affected shipyard workers and the police personnel based there. The Navy failed to properly inform the public about the health risks for the better part of three weeks after the fire broke out.¹⁵ That an underground chemical fire erupted and burned for months in a supposedly stable capped “remedy” highlights the risks to protectiveness from leaving highly toxic waste buried on site.

The Navy must plan for – not underplay – predictable risks such as those posed by global warming, especially at Parcel E-2, where buried contamination is extensive and will continue to be toxic far into the future. If the Navy gets it wrong as a result of its refusal to factor up-to-date science into the five-year review, it could unleash a catastrophe to the public health and the environment. As more and more data on sea-level and Bay-level rise emerges, the Navy must reconsider and conclude that the buried hazardous and radioactive waste at Parcel E_2 needs to be removed from proximity to residents and the rising Bay.

The *Draft Five-Year Review* needs to be redone to incorporate up-to-date science and public health data. Common sense and environmental justice require that remedies be revisited as part of the five-year review and revised remedies must prioritize removal of any and all hazardous and radioactive waste and contamination from the site.

¹⁵ Navy Owns Up to Monthlong Toxic Fire at Hunters Point, SFGate, Sept. 11, 2000, <https://www.sfgate.com/bayarea/matier-ross/article/Navy-Owns-Up-to-Monthlong-Toxic-Fire-at-Hunters-2739820.php>

Appendices

Appendix I. Probability that Sea-Level Rise will meet or exceed a particular height (in feet) in San Francisco (State of California Sea-Level Rise Guidance 2018 Update, p. 58)

The chart below displays the chances sea level rise will meet or exceed a certain height by the year listed.

SAN FRANCISCO - High emissions (RCP 8.5)

		Probability that sea-level rise will meet or exceed... (excludes H++)									
		1 FT.	2 FT.	3 FT.	4 FT.	5 FT.	6 FT.	7 FT.	8 FT.	9 FT.	10 FT.
2030		0.1%									
2040		3.3%									
2050		31%	0.4%								
2060		65%	3%	0.2%	0.1%						
2070		84%	13%	1.2%	0.2%	0.1%					
2080		93%	34%	5%	0.9%	0.3%	0.1%	0.1%			
2090		96%	55%	14%	3%	0.9%	0.3%	0.2%	0.1%	0.1%	
2100		96%	70%	26%	8%	3%	1%	0.5%	0.3%	0.2%	0.1%
2150		100%	96%	79%	52%	28%	15%	8%	4%	3%	2%

SAN FRANCISCO - Low emissions (RCP 2.6)

		Probability that sea-level rise will meet or exceed... (excludes H++)									
		1 FT.	2 FT.	3 FT.	4 FT.	5 FT.	6 FT.	7 FT.	8 FT.	9 FT.	10 FT.
2060		43%	14%	0.2%							
2070		62%	4%	0.6%	0.2%						
2080		74%	11%	2%	0.4%	0.2%	0.1%				
2090		80%	20%	3%	1.0%	0.4%	0.3%	0.1%	0.1%		
2100		84%	31%	7%	2%	0.8%	0.4%	0.2%	0.1%	0.1%	
2150		93%	62%	31%	14%	7%	4%	2%	2%	1%	1%

Appendix II. Projected Sea-Level Rise (in feet) for San Francisco (State of California Sea-Level Rise Guidance, p. 57)

The chart below portrays the probabilistic projections for sea-level rise height, along with the H++ scenario (shown in the far right, blue column), as seen in the Rising Seas Report.

		Probabilistic Projections (in feet) based on Kopp et al. 2016				H++ scenario (Sweet et al. 2017) *Single scenario	
		MEDIAN 50% probability sea-level rise meets or exceeds...	LIKELY RANGE 66% probability sea-level rise is between...	1-IN-20 CHANCE 5% probability sea-level rise meets or exceeds...	1-IN-100 CHANCE 0.5% probability sea-level rise meets or exceeds...		
		Low Risk Aversion			Medium + High Risk Aversion	Extreme Risk Aversion	
High emissions	2010	0.4	0.3 - 0.5	0.6	0.8	1.0	
	2040	0.6	0.5 - 0.8	1.0	1.3	1.8	
	2070	0.8	0.6 - 1.1	1.4	1.9	2.7	
Low emissions	2040	1.0	0.6 - 1.3	1.6	2.4		
	2060	1.1	0.8 - 1.5	1.8	2.6	3.9	
	2070	1.1	0.8 - 1.5	1.9	3.1		
High emissions	2070	1.4	1.0 - 1.9	2.4	3.5	5.2	
	2090	1.3	0.9 - 1.8	2.3	3.9		
	2090	1.7	1.2 - 2.4	3.0	4.5	6.6	
Low emissions	2090	1.4	1.0 - 2.1	2.6	4.7		
	2100	2.1	1.4 - 2.9	3.6	5.6	8.3	
	2100	1.6	1.0 - 2.4	3.2	5.7		
High emissions	2100	2.5	1.6 - 3.4	4.4	6.9	10.2	
	2120	1.7	1.2 - 2.5	3.4	6.3		
	2140	2.6	1.9 - 3.5	4.5	7.3	11.9	
Low emissions	2120	1.9	1.2 - 2.8	3.9	7.4		
	2140	3	2.2 - 4.1	5.2	8.6	14.2	
	2150	2.1	1.3 - 3.1	4.4	8.5		
High emissions	2150	3.3	2.4 - 4.6	6.0	10.0	16.6	
	2170	2.2	1.3 - 3.4	4.9	9.7		
	2170	3.7	2.6 - 5.2	6.8	11.4	19.1	
Low emissions	2150	2.4	1.3 - 3.8	5.5	11.0		
	2150	4.1	2.8 - 5.8	7.7	13.0	21.9	

Appendix III. San Francisco Sea Level Rise Scenarios (Bay Conservation and Development Commission's Adapting to Rising Tides Bay Area Sea Level Rise Analysis and Mapping Project, Final Report 2017, Pages 13-15)

The first six scenarios (12, 24, 36, 48, 52, and 66 inches of SLR above MHHW) relate directly to the NRC SLR estimates, and they capture a broad range of scenarios between the most-likely scenario and the high end of the uncertainty range at both mid-century and the end of the century:

1. 12-inch SLR = 2050 most-likely SLR scenario
2. 24-inch SLR = 2050 high end of the range; or an existing 5-year extreme tide
3. 36-inch SLR = 2100 most-likely SLR scenario; or an existing 50-year extreme tide
4. 48-inch SLR = 2100 upper 85 percent confidence interval; or 6 inches of SLR plus a 100-year extreme tide
5. 52-inch SLR = 12-inch SLR plus 100-year extreme tide
6. 66-inch SLR = 2100 upper-end SLR scenario; or 24-inch SLR plus 100-year extreme tide

Inundation maps were also created for Bay water level elevations of 77, 84, 96, and 108 inches above MHHW. These levels are above current predictions for SLR likely to occur by 2100, but they are helpful in illustrating short-term flooding that could occur when extreme tides are coupled with SLR:

7. 77 inches above MHHW = 36-inch SLR plus 100-year extreme tide
8. 84 inches above MHHW = 48-inch SLR plus 50-year extreme tide
9. 96 inches above MHHW = 66-inch SLR plus 25-year extreme tide
10. 108 inches above MHHW = 66-inch SLR plus 100-year extreme tide

Sea Level Rise Scenario	Daily Tide	Extreme Tide (Storm Surge)						
	+SLR (in)	1yr	2yr	5yr	10yr	25yr	50yr	100yr
	Water Level above MHHW (in)							
Existing Conditions	0	12	19	23	27	32	36	41
MHHW + 6"	6	18	25	29	33	38	42	47
MHHW + 12"	12	24	31	35	39	44	48	53
MHHW + 18"	18	30	37	41	45	50	54	59
MHHW + 24"	24	36	43	47	51	56	60	65
MHHW + 30"	30	42	49	53	57	62	66	71
MHHW + 36"	36	48	55	59	63	68	72	77
MHHW + 42"	42	54	61	65	69	74	78	83
MHHW + 48"	48	60	67	71	75	80	84	89
MHHW + 52"	52	64	71	75	79	84	88	93
MHHW + 54"	54	66	73	77	81	86	90	95
MHHW + 60"	60	72	79	83	87	92	96	101
MHHW + 66"	66	78	85	89	93	98	102	107

APPENDIX IV



DEPARTMENT OF THE NAVY
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE

5820
Ser BPMP/003
March 15, 2018

The Honorable James Donato
United States District Court
Northern District of California
Federal Building and Courthouse
[REDACTED]

Dear Judge Donato:

SUBJECT: VICTIM IMPACT STATEMENT IN THE MATTER OF U. S. V. HUBBARD

The Department of the Navy has been designated a crime victim under 18 U.S.C. § 3771 as a result of the fraud committed by Mr. Hubbard, a former employee of Tetra Tech EC Inc. (Tt EC), and others. The Navy contracted Tt EC to prepare planning documents, investigate radiological contamination, conduct remediation, dispose of radioactive waste, and document their activities to support closure of radiologically-impacted sites and buildings at Hunters Point Naval Shipyard (HPNS) from 2003 to 2014. These activities were necessary prior to the Navy turning HPNS over to the City of San Francisco for redevelopment. The fraud committed by Mr. Hubbard and other Tt EC employees has caused not only a substantial financial loss to the Navy, but harm to the Navy's reputation, and it has cost the Navy substantial resources and time. The purpose of this statement is to give the Court a sense of the magnitude of the negative impact of this fraudulent conduct and how it has made the accomplishment of both the Navy's and the City's goals more difficult. Because of the widespread and continuing harm that he has caused the Navy, we ask that you award Mr. Hubbard a substantial sentence.

While the fraud committed by Mr. Hubbard and others has caused the Navy concrete and measurable monetary loss (addressed below), this fraud has also caused significant harm to the Navy that is much more difficult to quantify - but very real. The fraud and uncertainty surrounding Tt EC's work at HPNS has caused a complete loss of trust in the Navy by the local community. The new residents at HPNS are understandably anxious for their safety, and this has required additional effort by the Navy and regulators to address these concerns. The transfer of the property to the City will be delayed by many years, and the Navy has had to address the ire and frustration of the Mayor's Office, the Supervisor's Office, and local Congressional staffs. The redevelopment of HPNS was supposed to revitalize the community and provide jobs and affordable housing; all of that is now on hold indefinitely as the Navy and the regulatory agencies have determined that Tt EC's work is unreliable. The frustrations of these local constituencies have been channeled into a strong activist element which has made the Navy's public meetings tense, aggressive and explosive.

The fraud committed by Mr. Hubbard and others has also led to negative national media attention. The effort to respond to this negative media attention has required increased staffing to answer questions, prepare for interviews, and conduct risk communication training -- all of which pulled Navy staff away from their primary duties and caused collateral impacts to other Navy bases and projects.

In addition to responding to the media, correcting misinformation, and responding to the concerns of the public and politicians, the Navy's Base Realignment and Closure (BRAC) Office created a special Review Team to assess the fraud allegations, determine what level of additional site investigation was needed, perform sampling, and then incorporate these findings into a new Work Plan for HPNS. These activities diverted significant numbers of BRAC employees from their normal duties, causing additional disruption to numerous other Navy projects across the country. This diversion of personnel and resources resulted in delays and increased costs for these other projects and resulted in constant stress on the Navy staff over a sustained period of time. The efforts of the Review Team and other similar efforts (including legal and contract dispute efforts, technical re-calculations, political briefings to the City and Congressional delegations, and constant communication up and down the Navy chain of Command), has cost Navy personnel hundreds if not thousands of hours of additional work. The Navy estimates that the fraud committed by Mr. Hubbard and others has set back the planned transfer of HPNS property to the City by an approximate decade. This means not only lost development opportunities for the City and the local community, but continued cost to the Navy to hold and maintain the property.

The fraud has also caused a loss of confidence by the regulatory community (both EPA and California State regulators) regarding the Navy's radiological remediation program and the Navy's competence to implement it. The EPA has expressed to the Navy that they no longer have confidence in the work performed by Tt EC at HPNS, as well as at other Navy radiological sites including those located at Treasure Island and Alameda in the San Francisco Bay Area. The Navy now faces an uphill struggle to rehabilitate itself from this negative connotation in the regulatory community. It will take years to rebuild this credibility.

As I indicated above, the negative fiscal impact to the Navy of the fraud committed by Mr. Hubbard and others at HPNS is consequential, and continues to be assessed. The Navy awarded sixteen contract task orders to address radiological work at HPNS to Tt EC. To date, the Navy has paid Tt EC \$261.8M for work performed at HPNS. Due to the uncovered fraud, all of this work has been called into question and may need to be re-performed. After discovering evidence of Tt EC data falsification/manipulation, and becoming aware of allegations from former Tt EC employees/subcontractors, the Navy hired an independent contractor (Battelle) to provide daily onsite radiological quality assurance for all Navy contractors performing radiological work at HPNS. This cost approximately \$2.2M. The Navy also hired CH2MHill to re-evaluate the work performed and documented by Tt EC at HPNS. CH2MHill reviewed Tt EC's radiological

database for buildings and soil sites for falsification/manipulation using a variety of statistical and logic tests. This analysis provided evidence of previously-undiscovered data falsification and manipulation, which prompted the Navy to begin preparing work plans for an independent analysis of the worksite. The total cost for the database evaluation, work plan preparation, and preliminary field work is approximately \$8.8M. The Navy is currently working with federal and state regulatory agencies to determine the extent of rework that will be necessary at HPNS in order for the Navy to obtain the required "free release" from the regulatory agencies to turn the property over to the City. The EPA has indicated that it would require all work to be re-performed as originally contracted. However, these discussions are not final. The Navy's best estimates for required re-work costs currently range from \$100M to \$300M.

In sum, the Navy has expended \$272.8 M to date paying Tt EC for their work at HPNS, identifying the fraud, and taking measures to prevent further fraud. Depending on the cost of required re-work, this number will certainly rise to \$372.8 M and is likely to rise as high as \$572.8 M. This amount of money would buy a new Littoral Combat ship. It is nearly half of the Navy's total expenditures for *all* environmental clean-up activities at HPNS through fiscal year 2017 (\$991.1 M). This is money that could otherwise have been used by the Navy to train sailors, build ships, purchase aircraft, -- in short, to perform the Navy's core mission of fighting the country's wars, deterring aggression, and maintaining the freedom of the seas.

The fraud committed by Mr. Hubbard and others has undermined the taxpayer's trust in the Navy as a good financial steward. Taxpayers trust that the Navy only asks for what it needs, knowing that there are many other important and vital uses for limited funds. The Navy invests an enormous amount of time, energy, and pride in building this trust, and because of that, the military is generally considered one of the most trusted institutions in America. But it only takes the misconduct of a few individuals to erode that essential trust - misconduct like Mr. Hubbard's.

Mr. Hubbard's actions had far-reaching consequences for the United States, its employees, the City of San Francisco, the local residents, and the taxpayers. The Navy therefore respectfully requests that the Court consider a severe sentence for Mr. Hubbard that is commensurate with the adverse impacts of his fraud upon the Navy.

Sincerely,


LAURA DUCHNAK
Director

APPENDIX V

DECLARATION OF STEVEN J. CASTLEMAN

1. My name is Steven J. Castleman. I am an attorney licensed to practice law in the State of California. Together with my co-counsel, David Anton, I represent Greenaction for Health and Environmental Justice in this action and a Petition seeking to revoke the federal Materials License of Tetra Tech, EC, Inc. ("Tetra Tech"), License number 29-31396-01, issued by Nuclear Regulatory Commission ("NRC"). The Petition is pending before the Executive Director for Operations of the NRC. That Petition (Exhibit 1 to this action), supported by statements under penalty of perjury, demonstrates Tetra Tech engaged in widespread fraud, including reporting fraudulent sampling and scanning data, which has compromised the remediation of radioactive contamination at the Hunters Point Naval Shipyard in San Francisco, California ("Shipyard").
2. The U.S. Navy hired contractors to review the data reported by Tetra Tech in an attempt to ascertain which, if any, of those data are reliable. One or more of those contractors wrote the reports entitled *Draft Radiological Data Evaluation Findings Report for Parcels B and G Soil*, dated September 2017, which is attached to the Supplemental Filing as Exhibit 1 and *Draft Radiological Data Evaluation Findings Report for Parcels C and E Soil*, dated December 2017, which is attached to the Supplemental Filing as Exhibit 1. It supplements the evidence of fraud and was not known at the time of the filing of the Petition.
3. On January 12, 2018, I had a telephone conversation with Dr. Kathryn A. Higley, a Professor and Head of the School of Nuclear Science and Engineering in the College of

Engineering at Oregon State University. She has been hired by the U.S. Navy to act as a Community Technical Liaison for the radiation cleanup at the Shipyard.

4. During our phone conversation, Dr. Higley told me that the Navy has concluded, after data reviews including the one represented by Exhibit 1, that virtually all of the data reported by Tetra Tech is suspect. Later in our conversation she qualified what she said, saying a substantial but undefined proportion of Tetra Tech's data was "to a large extent useless." She also informed me that substantial re-sampling and re-scanning will be required to determine the full impact of Tetra Tech's fraud on the cleanup and the planning process for that project is currently under way.
5. On January 31, 2018, I attended a Community Open House meeting hosted by the Navy concerning the Hunters Point Shipyard radiological cleanup. Prior to the meeting I had a conversation with Derek Robinson, of the Navy's Base Realignment and Closure Program Management Office West ("BRAC PMO West"). He is the person in charge of the cleanup of the shipyard on behalf of the Navy. During our conversation, Mr. Robinson confirmed what Dr. Higley told me; the Navy had lost confidence in the Tetra Tech data. Mr. Robinson also said that the Navy was going to treat all Tetra Tech's data as unreliable and resample all locations where Tetra Tech did radiological work.
6. I declare under penalty of perjury that the foregoing is true and correct.



Steven J. Castleman
Attorney at Law

June 26, 2018

Date

APPENDIX VI

Steven Castleman

From: Steven Castleman
Sent: Tuesday, January 30, 2018 4:26 PM
To: 'Robinson, Derek J CIV NAVFAC HQ, BRAC PMO'
Cc: David Anton; 'Bradley Angel'; [REDACTED]
Subject: List of Witnesses/Meeting Request
Attachments: Witness list for Navy-2.pdf

Mr. Robinson,

Attached is the list of potential witnesses to the Tetra Tech fraud who should be interviewed.

The descriptions of what they know are based on information developed from other witnesses; they are not meant to limit the subject matter of interviews, but rather to act as a starting point for inquiry. Trained, professional investigators should be hired who will seek to learn all the witnesses know about Tetra Tech's fraudulent activities and who will follow up on any additional leads that result from such interviews.

I will await your response to our meeting request.

See you tomorrow evening.

Sincerely,

Steve Castleman

From: Robinson, Derek J CIV NAVFAC HQ, BRAC PMO [REDACTED]
Sent: Tuesday, January 30, 2018 8:06 AM
To: Steven Castleman
Subject: RE: Meeting Request/List of Witnesses

Dear Mr. Castleman,

I will not be able to meet this week, but have been discussing your request internally and should have a response by early next week.

Thank you for your patience.

Best Regards,

Derek J. Robinson, PE
BRAC Environmental Coordinator
[REDACTED]

-----Original Message-----

From: Steven Castleman [REDACTED]
Sent: Monday, January 29, 2018 11:54 AM
To: Robinson, Derek J CIV NAVFAC HQ, BRAC PMO
Subject: [Non-DoD Source] Meeting Request/List of Witnesses

Mr. Robinson,

I told you I would get you a list by last Friday of percipient witnesses that should be interviewed in the Tetra Tech case. Unfortunately, It that will have to be delayed until later this afternoon or tomorrow because I have gotten tied up on other pressing matters. I apologize for the delay.

On a different subject, are you able to meet this Thursday or Friday? If not, can we schedule a meeting that fits with your calendar?

Thank you.

Steve Castleman

Visiting Associate Professor & Staff Attorney

Environmental Law and Justice Clinic

[REDACTED]

GGU Law Logo - Email

Facebook Logo <<http://www.facebook.com/ggulaw>> Instagram Logo <<http://www.instagram.com/ggulaw>>
LinkedIn Logo <<https://www.linkedin.com/edu/golden-gate-university-school-of-law-17859>> Twitter Logo
<<http://www.twitter.com/ggulaw>> Youtube Logo <<http://www.youtube.com/goldengatelaw>>

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Steven Castleman

From: Steven Castleman
Sent: Friday, February 16, 2018 1:08 PM
To: 'Robinson, Derek J CIV NAVFAC HQ, BRAC PMO'
Cc: 'Bradley Angel'; [REDACTED] David Anton; 'Fairbanks, Brianna'; [REDACTED]
Subject: Additional Witnesses
Attachments: 2.16.18.ltr.robinson.pdf

Dear Mr. Robinson,

Attached please find a letter to you supplementing the witness list I sent you on January 30, 2018. It contains 5 additional names, all of whom worked in the on-site laboratory and whom we have reason to believe have personal knowledge of improper sample and data manipulation.

The letter also seeks a response to our August 2017 request for a meeting with you.

Steve Castleman

Visiting Associate Professor & Staff Attorney
Environmental Law and Justice Clinic
[REDACTED]

GOLDEN GATE
UNIVERSITY
SCHOOL OF LAW 



APPENDIX VII

RADIOLOGICAL SURVEY REPORT

NWTS #:Par A M/H Bkg Brick 012804

Page 1 of 1

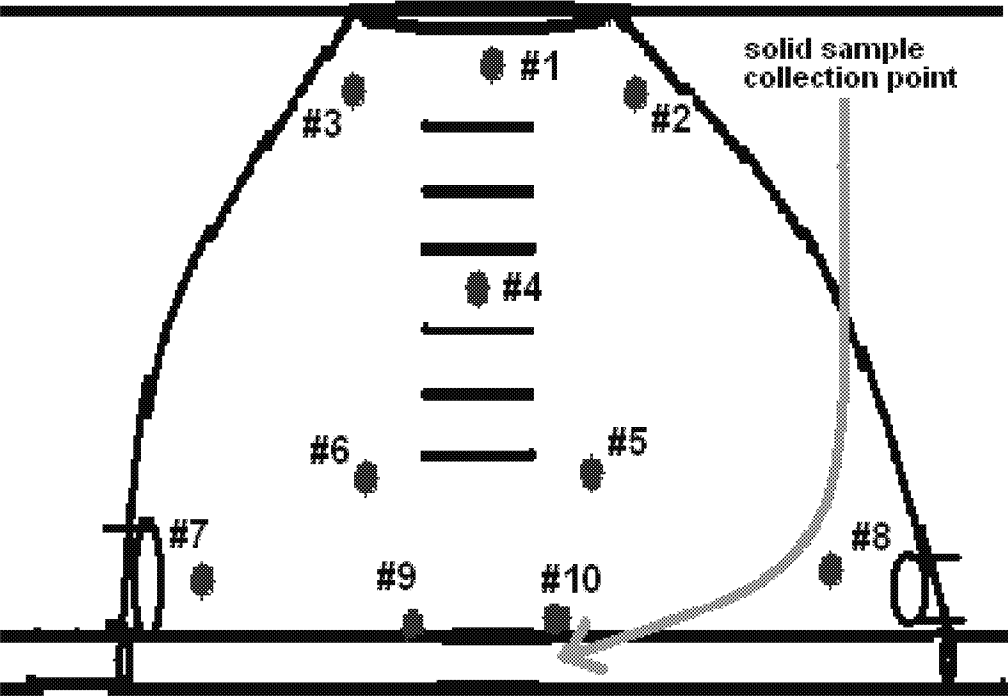
DATE:	January 28, 2004	INSTRUMENTATION USED				
TIME:	0800 hours	MODEL	S/N	EFF.%	BKRD	CAL. DUE DATE
SURVEYOR:	Bert Bowers	Ludlum: 19	101733	N/A	5-10 μR/hr	October 1, 2004
LOCATION:	Manhole, Par A (brick)	Ludlum: 2350-1	82955	N/A	10,514 CPM	August 21, 2004
REVIEWED BY:	Daryl DeLong	Ludlum: 2360	178154	α 12% β 6%	2 CPM 255CPM	October 13, 2004

μR dose rates = μR/hr; α, β & γ survey results = CPM

PURPOSE OF SURVEY:

Establish background reference area/levels (from non-impacted M/H location) similar to M/H's to be accessed for pneumatic plug installation (i/s sanitary sewer system).

Survey Results

<div style="text-align: center;"> <h3>Parcel A Manhole: Brick Lined</h3>  <p>● = discrete surveillance point</p> </div>	#	α	β	γ	μR
	1	2	317	15996	5
	2	4	349	15549	5
	3	4	325	16502	7
	4	3	419	16022	6
	5	4	348	15858	6
	6	2	365	15758	6
	7	2	300	16384	6
	8	0	378	16304	7
	9	1	335	15635	5
	10	2	334	18530	10
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a
	n/a	n/a	n/a	n/a	n/a

Remarks: Composite sample collected from w/i manhole trench



Gamma Spectroscopy Results

Sample results given in (pCi/g)

NWT Field Report

Ufo ID	Sample Description			
2N000031	Parcel A - 01(concrete) 259g 1/28/04 8:40			
Dry Weight (g)	Time Counted (s)	Operator	Date Acquired	Time Acquired
259	2699.1	Paul Wall	02-Feb-04	11:59:35 AM
Library Path	Reviewed By:		Date Sampled	Time Sampled
Hunter's Point 1.Lib			28-Jan-04	8:40:00 AM

Nuclide	Net Activity	MDA	Uncertainty	Soil DCGL
AC-228	7.1877E-01	2.2938E-01	4.9014E-01	*NA
AM-241	*<MDA	1.9088E-01	**	7.8000E+00
BI-212	*<MDA	6.0497E-01	**	*NA
BI-214	3.3371E-01	1.6542E-01	2.2379E-01	*NA
CO-60	1.9866E-02	1.5430E-02	3.4409E-02	4.2000E-01
Cs-137	*<MDA	9.6968E-02	**	1.3000E-01
EU-152	2.8179E-01 *F	1.2557E-01	2.2543E-01	1.3000E-01
EU-154	1.0062E-01	9.2507E-02	8.6375E-02	2.3000E-01
K-40	6.3481E+00	1.5329E+00	2.7700E+00	*NA
PA-234	*<MDA	1.1496E-01	**	*NA
PB-212	2.8228E-01	1.1802E-01	2.4798E-01	*NA
PB-214	5.1734E-01	1.6069E-01	3.2927E-01	*NA
RA-226	2.9653E+00	1.2805E+00	3.3784E+00	2.0000E+00
Th-230	2.2995E+01	1.3831E+01	4.9315E+01	*NA
Th-232	1.2421E+01	2.0385E+01	**	*NA
TH-234	1.1117E+00	1.8065E+00	**	*NA
Tl-208	*<MDA	5.4340E-02	**	*NA
U-235	5.9660E-01 #F	3.4542E-01	9.9026E-01	5.7000E-01

*F=Failed energy identification fraction and key energy tests demonstrating non-existence of the nuclide

#F = All energy peaks determining this isotope had bad poisson shape; this distortion signifies non-existence of the radionuclide

*<DCGL=Nuclide failed key line energy and shape tests and is determined not to be present in sample

*<MDA = Activity for this Nuclide is less than the Minimum Detectable Activity (MDA)

** = Activity for this Nuclide is less than the MDA, therefore no Uncertainty is necessary

*NA = No DCGL available for this Nuclide



Gamma Spectroscopy Results

Sample results given in (pCi/g)

NWT Field Report

Ufo ID	Sample Description			
2N000030	Parcel A - 02 259g 1/28/04 8:35			
Dry Weight (g)	Time Counted (s)	Operator	Date Acquired	Time Acquired
259	2698.88	Paul Wall	02-Feb-04	10:58:20 AM
Library Path	Reviewed By:		Date Sampled	Time Sampled
Hunter's Point 1.Lib			09-Feb-04	8:30:00 AM

Nuclide	Net Activity	MDA	Uncertainty	Soil DCGL
AC-228	*<MDA	4.5302E-01	**	*NA
AM-241	6.0949E-02	2.1121E-01	**	7.8000E+00
BI-212	1.0652E+00	6.4706E-01	1.0652E+00	*NA
BI-214	8.6659E-01	1.7318E-01	4.8374E-01	*NA
CO-60	2.6491E-03	1.5431E-02	**	4.2000E-01
Cs-137	*<MDA	1.0565E-01	**	1.3000E-01
EU-152	1.9823E-01 *F	1.4611E-01	2.3041E-01	1.3000E-01
EU-154	1.3078E-01	9.7271E-02	2.6244E-01	2.3000E-01
K-40	1.2301E+01	1.5329E+00	3.3491E+00	*NA
PA-234	3.4336E-01	2.3155E-01	5.9886E-01	*NA
PB-212	1.1345E+00	1.4311E-01	3.1889E-01	*NA
PB-214	1.1768E+00	1.5021E-01	4.4135E-01	*NA
RA-226	3.1165E+00	1.4884E+00	4.0652E+00	2.0000E+00
Th-230	*<MDA	1.2723E+01	**	*NA
Th-232	2.6165E+01	2.4733E+01	4.5565E+01	*NA
TH-234	*<MDA	1.8332E+00	**	*NA
Tl-208	*<MDA	7.7685E-02	**	*NA
U-235	6.1342E-01 #F	3.5179E-01	9.7145E-01	5.7000E-01

*F=Failed energy identification fraction and key energy tests demonstrating non-existence of the nuclide

#F = All energy peaks determining this isotope had bad poisson shape; this distortion signifies non-existence of the radionuclide

*<DCGL=Nuclide failed key line energy and shape tests and is determined not to be present in sample

*<MDA = Activity for this Nuclide is less than the Minimum Detectable Activity (MDA)

** = Activity for this Nuclide is less than the MDA, therefore no Uncertainty is necessary

*NA = No DCGL available for this Nuclide



TETRA TECH EC, INC.

September 7, 2018

Mr. Derek Robinson
Navy BRAC Environmental Coordinator



Re: Fourth Five-Year Review, Hunters Point Naval Shipyard
Tetra Tech, EC, Inc. Comments

Dear Mr. Robinson:

Tetra Tech EC, Inc. ("TtEC") appreciates the opportunity to provide these comments on the July 9, 2018, Draft Fourth Five-Year Review, Hunters Point Naval Shipyard ("Review").

TtEC has conducted remedial work at the Hunters Point Naval Shipyard Site ("HPNS") since 2002 pursuant to a series of contracts with the Navy. Throughout all of its work at HPNS, TtEC has been committed to meeting its contractual requirements with the Navy, ensuring a healthy and safe work environment for HPNS employees, and conducting thorough remediation to effectively address environmental contamination at the Site. As part of this process, in 2012, the Navy and TtEC investigated a discrete set of soil samples from HPNS that did not appear to be representative of the locations sampled. In 2014, TtEC issued a comprehensive report describing the investigative steps and corrective actions taken, all of which was done in close consultation with the Navy and accepted under the terms of the contract. The Nuclear Regulatory Commission ("NRC") also conducted an independent investigation and took no actions with respect to TtEC's NRC license. Though no one admitted to wrongdoing at that time, two TtEC employees, who previously worked for the HPNS subcontractor New World Environmental ("NWE"), were placed on leave following the investigation. Those two individuals, Justin Hubbard and Steven Rolfe, many years later admitted to the U.S. Department of Justice that they switched certain soil samples at issue in the investigation so that "clean" soil was analyzed rather than soil from the sampling locations. Hubbard and Rolfe were prosecuted and sentenced to prison, and TtEC fully supports the Government's actions in those cases.

Following the 2012 investigation and 2014 report, a handful of former NWE employees made general accusations that other fraudulent sampling activities took place at HPNS. After a thorough investigation, TtEC has found no evidence to support these allegations. TtEC stands by its work at HPNS and has continued to cooperate with the Navy in meeting the objectives for the HPNS Site, while defending itself and its valued employees against these baseless accusations.

TtEC has identified several statements in the Review, as discussed herein, which are misleading with respect to the discrete and limited data issues that have been identified,



investigated, and addressed at HPNS. These unfounded statements suggest significant impropriety without support and should be revised to reflect the true status of TtEC's work at HPNS.

There is no evidence of widespread data falsification at HPNS.

TtEC objects to the statement found at page 5-1 of the Review, which states that BRAC Cleanup Team (BCT) members expressed "[c]oncerns related to the adequacy of historical radiological remediation based on *the discovery of widespread falsification of radiological data by a Navy contractor.*" (Emphasis added.) This statement is inaccurate, as there has been no "discovery of widespread falsification of radiological data" at HPNS. Rather, the only known anomalous data originated with two individuals, Justin Hubbard and Steven Rolfe, both of whom admitted to wrongdoing covering a brief period of time and relating to only a limited number of samples. The misconduct of these two individuals is by no means "widespread." Apart from the admissions and guilty pleas of Hubbard and Rolfe, which relate to information that has already been investigated and addressed by TtEC in coordination with the Navy, there is no evidence of data falsification by TtEC at HPNS.

In 2017, the Navy contracted with CH2M Hill, Inc. (now a part of Jacobs Engineering Group, Inc.) and other competitors of TtEC to review data collected by TtEC at HPNS. These consultants applied incorrect, and in many cases, arbitrary criteria to the data, and used invalid statistical and analytical methods to prepare Draft Data Evaluation Reports ("Draft Reports") that improperly criticize significant portions of TtEC's work. The Draft Reports conclude, based on arbitrary and misapplied statistical and analytical tests, that a large percentage of the data collected by TtEC at HPNS shows "*potential* evidence" of data manipulation or falsification. Thus, the Draft Reports, which primarily refer to only "potential" issues, do not support the unequivocal statement in the Review regarding the "discovery of widespread falsification." Moreover, TtEC has submitted Technical Comments on the June 2018 Draft Parcel G Removal Site Evaluation Work Plan, which provide an in-depth analysis of the statistical and methodological deficiencies of the Draft Reports.

The Navy's conclusion that HPNS remediation work was compromised is unsupported.

TtEC also objects to the statements found at pages 6-7, 6-14, and 7-2 of the Review stating:

"[t]he Navy has *concluded [or determined]* that a significant portion of the radiological survey and remediation work completed to date *was compromised* by potential manipulation and/or falsification of data by one of its radiological remediation contractors...." (Emphasis added.)

On their face, these statements are internally inconsistent. As discussed above, evidence of *potential* manipulation or falsification cannot support a conclusion that there are "widespread" issues with the data collected at HPNS, or that the data has been compromised.


Moreover, the unsubstantiated allegations made by certain former employees of NWE do not support the misleading statements included in the Review. The allegations of wrongdoing being advanced by so-called "whistleblowers" – who have financial interests in the claims against TtEC – will be disproven by readily available documentary evidence, once TtEC is provided the opportunity to defend its work at HPNS.

TtEC requests that the misleading statements in the Review identified above be revised to accurately reflect the work conducted by TtEC at HPNS, and to avoid further prejudice to TtEC. At a minimum, the Review should include the following statement:

"TtEC is cooperating with the Navy's ongoing review of the HPNS work. TtEC has continued to investigate any new allegations and is providing responses and additional information, which it believes demonstrate that there was no widespread data falsification at HPNS. Subject to further discussions with the Navy, TtEC also has offered to support resampling or retesting efforts."

As an established environmental remediation company, TtEC looks forward to continued cooperation with the Navy and other interested stakeholders to address concerns related to any remedial work completed at HPNS. Having worked at HPNS for many years, TtEC understands the challenges faced by the Defense Department in closing HPNS after the Navy's 35 years of operations there. TtEC continues to offer its resources, including its knowledge of the site and work performed, to assist the Navy in ensuring that the remedial actions completed at HPNS meet all required standards and are protective of human health and the environment.

Sincerely,



A.N. Bolt, PE, PMP
President, Tetra Tech EC, Inc.

cc: Karen Barba, Supervisory Contract Specialist